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REMEDIAL PROJECT MANAGERS' MEETING  
REGIONAL WATER QUALITY CONTROL BOARD -

LOS ANGELES

19 July 1996

ATTENDEES:

Sayareh Amir, DTSC

Jon Bishop, RWQCB-LA

Charles L. Buri, JPL

Mark Cutler, Foster Wheeler

Debbie Lowe, U.S. EPA

Dan Melchior, Foster Wheeler (by telecon)

Penny Nakashima, DTSC

Stephen Niou, URS

Judith A. Novelly, JPL

B.G. Randolph, Foster Wheeler

Barbara Renzi, DTSC

Peter Robles, Jr., NASA



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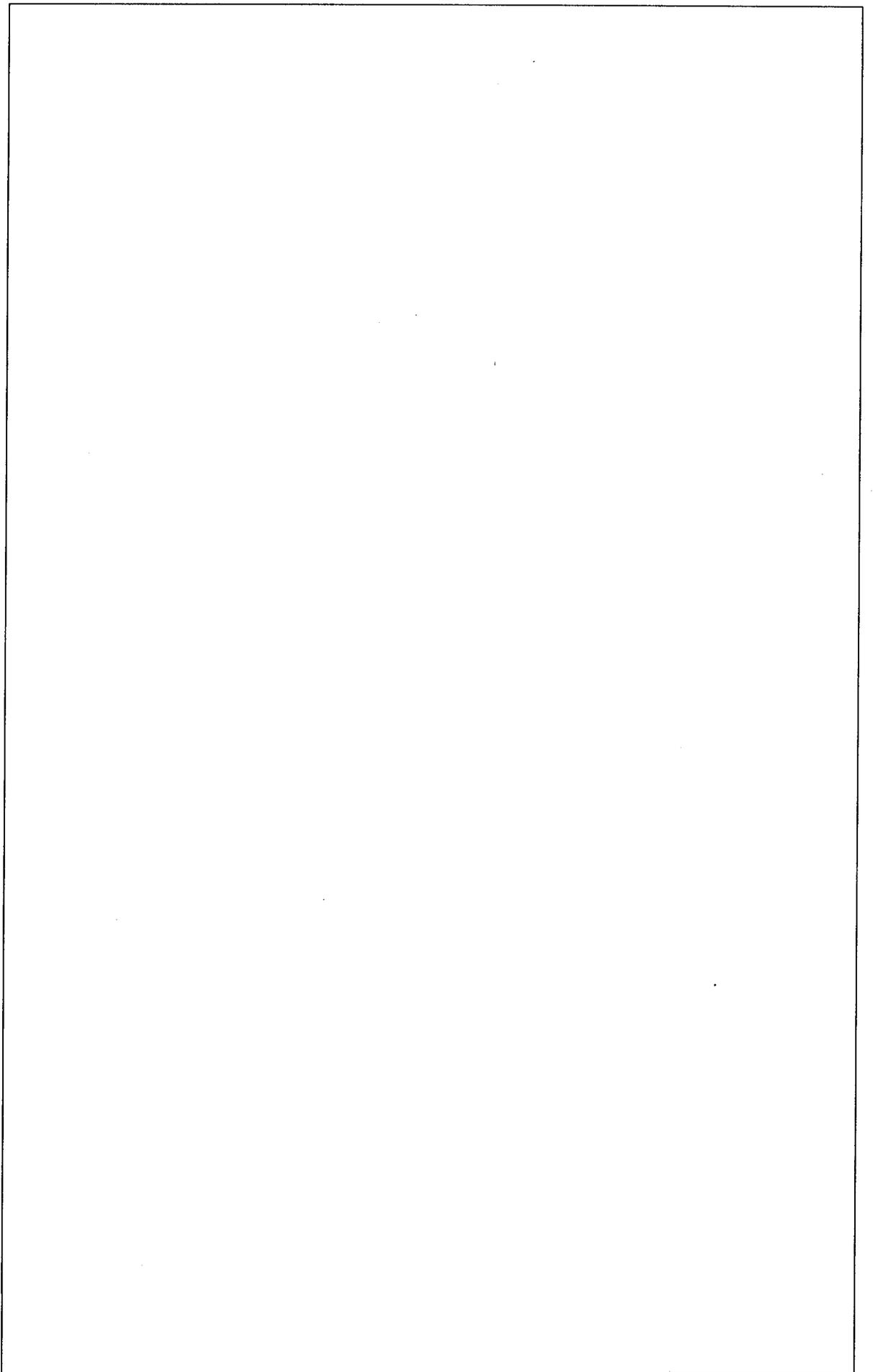
21 Peter Robles, Jr., NASA

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25 Reported by: Louise K. Mizota, CSR 2818



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Monterey Park, California

July 19, 1996

10:15 A.M.

BURIL: Dan, for your benefit, I scratched up on a flip chart here a three-line agenda. We can add or subtract to this as we think necessary, of course.

The first thing is to have DTSC explain their concerns again in a face-to-face forum so we understand where they're all coming from and basically what's driving those things.

Then we have some data validation results we want to share with everybody, be sure you're aware of some of the things we have as far as possible resolutions to some of these.

And then ultimately just discussion to try and resolve what we have in front of us today.

MELCHIOR: Great.

ROBLES: Let's go around the room.

LOWE: I have an item. This is Debbie.

But at the end I'd like to talk about the schedule again. I had made a request to have NASA provide me some specifics about the removal action, which you did through a letter. And I'd like to

1 talk about that.

2 BURIL: Okay. That's fine. I'll go ahead and  
3 put that as number 4.

4 ROBLES: There's an understanding we're going to  
5 work through because people have to leave at 1:00.  
6 O'clock.

7 LOWE: No. Jon has to leave at 1:00 o'clock. I  
8 think we can continue to work without him.

9 BISHOP: Yes.

10 LOWE: When Jon is done he will come back and  
11 join us.

12 BISHOP: I just have another meeting at 1:00

13 BURIL: I was under the impression, Debbie, you  
14 had an appointment.

15 LOWE: No. Does anyone else have time  
16 constraints?

17 ROBLES: No.

18 BURIL: None.

19 Why don't we, if we could, for the benefit  
20 of the people doing the recording for us, can we  
21 start going around the table just to kind of  
22 identify everybody and get a voice and so forth.

23 Pete, why don't you start.

24 ROBLES: I'm Peter Robles, the RPM Manager for  
25 NASA for the JPL and Edwards Superfund sites.

1 BURIL: I'm Chuck Buril, manager of  
2 Environmental Affairs at JPL and on-site coordinator  
3 for the Superfund project.

4 RANDOLPH: B.G. Randolph, OU-2 Operable Unit  
5 Manager at JPL. I'm with Foster Wheeler.

6 NOVELLY: Judy Novelly, JPL.

7 CUTLER: Mark Cutler with Foster Wheeler, the  
8 Operable Unit Manager for OU-1 and -2.

9 NIOU: Stephen Niou, URS, technical support to  
10 EPA.

11 LOWE: Debbie Lowe, U.S. EPA.

12 AMIR: Sayareh Amir, DTSC Site Mitigation.

13 NAKASHIMA: Penny Nakashima, DTSC.

14 RENZI: Barbara Renzi. I support Penny as a  
15 toxicology risk assessor.

16 BISHOP: Jon Bishop, with the Regional Board.

17 BURIL: Okay.

18 LOWE: So I guess the other time constraint that  
19 came up is that Barbara needs to be at the airport  
20 at 4:00 o'clock.

21 BURIL: I knew there was another constraint  
22 somewhere.

23 LOWE: And that Penny is her ride.

24 BURIL: To kind of kick things off, then, what  
25 I'd like to suggest again is to just ask DTSC to

1 take each of the comments that they've made and  
2 maybe give us a little more understanding of where  
3 you're coming from and what has changed between our  
4 previous meetings and now that has generated  
5 comments.

6 NAKASHIMA: Okay. I guess we should start with  
7 the ones in which JPL and DTSC have a disagreement  
8 on rather than the ones that we've already resolved.

9 BURIL: That's fine. Whatever you'd like to do.

10 NAKASHIMA: The first one would be on OU-1 for  
11 the groundwater samples.

12 DTSC is recommending that groundwater  
13 samples include analyses for the SVOCs and Title 22  
14 metals and the tributyl tin in addition to the VOCs  
15 and the chrome that you've proposed.

16 Then the other issue is the additional  
17 soil sampling in the Arroyo and the analysis of the  
18 tributyl tin as well for the soil.

19 The other issue that we haven't resolved  
20 yet is the use of the sonic drilling method.

21 BURIL: Okay. I'm going to suggest that we take  
22 those as things to put on the flip chart here.

23 Penny, it's not just OU-1 you're talking  
24 about. You're talking about the entire monitoring  
25 program, aren't you, for this, the tributyl tin,

1 SVOCs and Title 22 metals?

2 NAKASHIMA: For the SVOCs and the metals, that  
3 would be the entire monitoring program.

4 BURIL: OU-1 in parentheses. I just wanted to  
5 be sure.

6 And then the second one is --

7 NAKASHIMA: The additional soil samples.

8 BURIL: Soil sampling.

9 This is both borings, more of those, the  
10 trenches, which is possible increased sampling.

11 And then the analyses -- right? Is that  
12 right?

13 NAKASHIMA: Correct.

14 BURIL: -- for tributyl tin?

15 And is there anything else there? I want  
16 to be sure that we --

17 ROBLES: Yes. Sonic boring.

18 CUTLER: Sonic drilling.

19 ROBLES: Sonic drilling.

20 BURIL: I'll put that on the back page. We can  
21 get through the first ones, then pick up on that  
22 one. Is that okay?

23 ROBLES: Any other concerns? Issues?

24 NAKASHIMA: I think that's it. Those are the  
25 three things that we were stuck on. Is there

1 anything else, B.G. or Mark?

2 BURIL: That pretty much covers it, doesn't it,  
3 Mark? B.G.?

4 RANDOLPH: Yes.

5 BURIL: Dan, is there anything else you can  
6 think of that we would want to incorporate on this?

7 MELCHIOR: It looks like you've covered all the  
8 things.

9 BURIL: Good enough.

10 Penny, if we could ask you to walk through  
11 what it is you believe to have changed and why you  
12 think it's important, it would help us a great deal.

13 NAKASHIMA: Well, there are -- okay. In the  
14 proposal that you submitted for your analyses for  
15 the groundwater, I mean, what I recall from previous  
16 meetings is that we had not discussed the  
17 elimination of specific COPCs, and there wasn't a  
18 rationale that was provided.

19 BURIL: COPC?

20 NAKASHIMA: COPC.

21 BURIL: What is that?

22 NAKASHIMA: Contaminants of potential concern.

23 BURIL: Thank you.

24 NAKASHIMA: There wasn't a rationale provided in  
25 the proposed -- or the draft addenda to the

1 workplans to eliminate those. And that was where my  
2 concern was. Because there are a lot of times where  
3 you have -- the contaminants are detected and even  
4 though they don't exceed the MCLs, they still -- you  
5 still need to collect the data for the risk  
6 assessment.

7 ROBLES: Even if they don't exceed the MCLs.

8 NAKASHIMA: Right. Correct.

9 BURIL: Can you explain that to us as to why?

10 RENZI: I just think in terms of the groundwater  
11 quality issue, if -- as long as they're being  
12 detected, I mean, I don't think once it drops below  
13 the MCL you should stop monitoring or stop  
14 analyzing. Because you're collecting samples  
15 anyway, right?

16 NAKASHIMA: Right. I think JPL's concern here  
17 is the amount of labor and the analyses costs for  
18 these, analyzing for the metals and the SVOC.

19 BURIL: That's partly it. The other part is  
20 that it changes, at least from our perspective,  
21 materially what we had thought we had reached  
22 agreement on. So it's those things plus the other.  
23 That's another part of it.

24 ROBLES: The first part to that, justification  
25 hadn't been put into the addendum to resolve it.

1 That might be a question that we need to address.

2 NAKASHIMA: If I could say one more thing before  
3 you continue.

4 ROBLES: Sure. Go ahead.

5 NAKASHIMA: DTSC has proposed to actually have  
6 the samples analyzed at our laboratory --

7 BURIL: Right.

8 NAKASHIMA: -- if this doesn't fit into your  
9 schedule or your budget for this fiscal year.

10 BURIL: Without going too much further into the  
11 details on that, your rationale behind wanting these  
12 analyses in there is simply because they've been  
13 detected in the past and you do not want to stop  
14 sampling until they have reached nondetect?

15 Is that what your thought is?

16 NAKASHIMA: No, no, no.

17 RENZI: What concentration values would you be  
18 using for the risk assessment if you don't have  
19 recent data? I mean, I didn't read the monitoring  
20 plan, so I'm not -- I just was answering specific  
21 questions. I didn't review the plans so I don't  
22 know the extent of the number of chemicals that are  
23 being eliminated. I just assumed you were using  
24 analytical methods that were like scans that  
25 included a suite of VOCs or SVOCs and not --

1 BURIL: For VOCs that's true. For SVOCs we have  
2 not planned to do any scan whatsoever based on past  
3 data.

4 LOWE: So for the metals and the SVOCs, what is  
5 NASA planning to do in terms of the risk assessment  
6 with that data, with the old data if it is not  
7 collected as part of this groundwater monitoring?  
8 Was it intended just not to include those in the  
9 risk assessment?

10 BURIL: No, no. What we were planning to do was  
11 to utilize the data we have already collected. We  
12 would collect additional data from the three new  
13 wells and we would use the full analysis. Correct  
14 me if I'm wrong, guys, but, as I recall, we would  
15 use the full analysis suite on three additional  
16 wells and go from there.

17 CUTLER: That's not what we proposed. We had  
18 done the full suite of semivolatiles and metals  
19 during RI events.

20 LOWE: Okay.

21 CUTLER: And we identified some data gaps.

22 BURIL: That's right.

23 CUTLER: Maybe I'm speaking for myself. The way  
24 it's all been written up is, these three additional  
25 wells, their sole purpose in life is to find out

1 where this VOC plume extends to. They're just  
2 filling data gaps.

3       LOWE: I can agree with that statement. But my  
4 question is, really, when you do the risk assessment  
5 are you going to ignore metals and SVOCs?

6       CUTLER: No.

7       LOWE: Or are you going to somehow incorporate  
8 the old data, the RI data?

9       BURIL: The old data up to level 4 is going to  
10 be incorporated.

11       LOWE: Okay. Can you kind of just explain  
12 briefly how you would do that?

13       CUTLER: I think if you looked at the data you  
14 might see there's really nothing there. And to  
15 really, almost to call it a contaminant or potential  
16 concern -- look at the data and then you'll see. It  
17 may not be --

18       LOWE: So you're going to take the RI, SVOC and  
19 metal data and screen it to see if they come out as  
20 chemicals of potential concern.

21       BURIL: You've got it, Debbie. What we're  
22 looking at is to take the initial review of the  
23 data. I can't recall what we called it in this, but  
24 it's more or less the screen evaluation, the risk  
25 assessment to determine whether or not there is a

1 potential concern and risk based on the  
2 concentration or on completed pathways and so forth.

3           Based on that information we would then  
4 look at the concentrations and see if we even have a  
5 completed pathway, is there something that we're  
6 really concerned about.

7           And the answer from the metals  
8 perspective, at least at this point in time, appears  
9 to be no. There aren't any metals, with the  
10 exception of chromium that we found at one location.

11           LOWE: Okay. How did you come up with that  
12 conclusion? Because it's my understanding from the  
13 flow charts that you're going to be screening in two  
14 ways. You're going to screen against the Region 9  
15 PRGs and you're also going to screen against the  
16 DTSC PEA guidance.

17           BURIL: That's correct.

18           LOWE: So have you only done one of those  
19 screens or have you done both of those screens  
20 already on the RI data? Or have you not done that,  
21 you've just kind of looked at the data and that's  
22 your feeling?

23           BURIL: The screens aren't formally complete.  
24 But we have gone through that process.

25           What it comes down to --

1           LOWE: For both methods?

2           BURIL: Yes.

3           LOWE: Okay.

4           BURIL: To my understanding, it has been done.

5 I think the thing that you need to be able to  
6 recognize is that when you look at the data, the  
7 data are showing that we are well below any criteria  
8 that we can identify thus far.

9           LOWE: So the only things in terms of --

10          BURIL: I know what they're saying in terms  
11 of --

12          ROBLES: It doesn't matter below the criteria  
13 because to them if they see it --

14          BURIL: No, I know. But you see, the only thing  
15 is that we can't identify a pathway for groundwater  
16 completion, which is where the concern would be for  
17 water. There's no completed pathway based on the  
18 evaluation we've done thus far.

19          LOWE: But that doesn't come into your screen  
20 against PRGs and PEA. Is that correct?

21                 I mean, when you're screening your VOCs  
22 and your SVOCs and your metals in groundwater  
23 essentially for PCE and TCE, you're screening  
24 against MCLs or Region 9 PRGs number. Is that  
25 correct?

1 I mean, you're confusing issues here.  
2 You're talking about there not being a completed  
3 pathway and then you're talking about the screen  
4 against these very conservative screening numbers,  
5 which are the Region 9 PRG numbers.

6 I'm sorry. Did I just lose you?

7 BURIL: You've lost me a little bit.

8 Let me see if I can make this as succinct  
9 as I can.

10 Our position based on the data we have  
11 thus far is that, one, there is no complete pathway.  
12 Regardless of where this fits in the process, there  
13 is no complete pathway that would indicate that  
14 there is concern with groundwater. It simply  
15 doesn't exist because of the nature of the site.

16 Secondly, the concentrations that we have  
17 in the groundwater are extremely small and, in fact,  
18 they're well below MCLs.

19 Now, I know you're going to question about  
20 the PELs, PRGS, or PEA, whatever that is. That  
21 process I believe was done on a screening level  
22 already. In fact, I think we got the report in  
23 house now, don't we, Dan?

24 BISHOP: I have a couple of quick questions  
25 about that. One is, so your conclusion is that

1 there's no pathway for groundwater so that there's  
2 no risk associated with the groundwater  
3 contamination of JPL?

4 BURIL: In terms of an ecological receptor, yes.

5 BISHOP: But not human health.

6 BURIL: Human health, we're well below  
7 concentrations of --

8 BISHOP: Wait, wait, wait. For what?

9 LOWE: Let me jump in here for a second.

10 BURIL: All right.

11 LOWE: If you go back to your flow chart, the  
12 first thing that you look at is you're screening  
13 against PRG and PEA to determine if you have to do  
14 more. Then your second question is, is there an  
15 exposure pathway?

16 See, what you're saying, you're going  
17 backwards through your flow chart. You're saying,  
18 number one, there's no exposure pathway and, number  
19 two, everything is below your training levels.

20 ROBLES: So we need to separate the issue. They  
21 shouldn't be connected. It should be one process  
22 and then go to the other one.

23 LOWE: Right.

24 ROBLES: It shouldn't be one justifies the other  
25 because it's circular. That's what you're saying.

1           LOWE: Correct me if I'm wrong, but I remember  
2 the flow chart doing that screening first. So my  
3 question keeps coming back to: Have you done that  
4 screening and can you tell me definitively that you  
5 only have one well with chromium that exceeds any  
6 screening levels?

7           CUTLER: No, not in any formal way.

8           BURIL: That's what I indicated earlier, is that  
9 it has not been formalized.

10          CUTLER: I think from what I see, I'm not a risk  
11 assessor, but I think we're getting into the risk  
12 assessment part of things. Maybe we should back up  
13 and look at what we've got.

14                       We have two complete level 4 data  
15 packages, rounds of sampling for volatiles and  
16 metals. We've been sampling on the site since 1990.  
17 I know you guys don't like that old data. We have a  
18 ton of data. And I still don't think semivolatiles  
19 and metals, other than chromium, are contaminants of  
20 concern. So maybe some of this is a moot point. If  
21 we could see what we found it might just go away.

22          MELCHIOR: Chuck, have we passed out the tables  
23 yet?

24          BURIL: No, we haven't, Dan. Maybe that's  
25 something that would be valuable because --

1 MELCHIOR: We're talking in circles and we need  
2 to look at some hard --

3 ROBLES: But, Dan, before we do that we need to  
4 have the rationale first.

5 MELCHIOR: Okay

6 ROBLES: Go ahead.

7 RENZI: I'd like just to speak to the risk  
8 assessment process as we see it.

9 The very first step in a risk assessment  
10 is the site characterization. So I think that's the  
11 first -- you have contamination and I think you've  
12 made steps in your monitoring program to identify or  
13 at least start to determine the extent of the  
14 contamination.

15 Then there are other concerns. You know,  
16 the Regional Water Board is going to be concerned  
17 about the water quality in general. But for risk  
18 assessment, when you do the screening and the PEA,  
19 and it appeared in the proposal you had, your flow  
20 chart, that you had addressed the total  
21 multichemical risk. So what I hear now is comparing  
22 single chemical numbers.

23 I want to caution you in the screening  
24 level risk assessment done as per the preliminary  
25 endangerment assessment, the PEA, you look at the

1 total multichemical risk. In other words, if you  
2 have like a value similar to a PRG for a single  
3 chemical, a risk associated with a 10 to the minus  
4 6, you still have to look at the risk associated  
5 with all the chemicals, including the VOCs.

6 So for screening level risk assessment you  
7 look at the total multichemical risk.

8 ROBLES: Even if they are below the MCL levels  
9 in some of those chemicals?

10 RENZI: MCL doesn't come into play in the risk  
11 assessment. Those are regulatory standards for  
12 drinking water. I'm talking about human health risk  
13 assessment. Those are ARARs and you get down the  
14 line for your risk management decision.

15 I'm talking about the front end of the  
16 risk assessment, the screening risk assessment. You  
17 look at all the chemicals, you look at the total  
18 risk, the total multichemical risk, it exceeds 10 to  
19 the minus 6. Then according to our guidance, then  
20 you make a decision you need to make further action.

21 ROBLES: Regardless of the quality of the  
22 chemical?

23 RENZI: Are you talking about a mass?

24 RENZI: If you detect --

25 ROBLES: Regardless of what detection you find.

1 BURIL: We've got parts per trillion  
2 concentrations --

3 RENZI: If you detect --

4 BURIL: -- of a variety of things.

5 ROBLES: So you say if we detect --

6 RENZI: It depends on the chemical. Vinyl  
7 chloride can present 10 to the minus 6 risk at a  
8 part per trillion model. I mean, you know, subpart  
9 per billion level of drinking water. So the MCLs  
10 aren't entirely health based. They do take into  
11 consideration technical ability to reduce the  
12 levels.

13 ROBLES: So what I'm hearing is anything that we  
14 detect we've got to do a health risk issue for that?

15 RENZI: If for some reason in your data  
16 validation you eliminate some of those SVOCs. I  
17 noticed you had caffeine detected in some of those.  
18 I mean, what are the source for those? Were they  
19 detected in laboratory blanks?

20 It could be -- if what you're saying is  
21 correct you may eliminate some of those through your  
22 data validation. But those that remain after your  
23 data validation need to be addressed in the risk  
24 assessment. They may pose a minimal risk, in which  
25 case, you know, you wouldn't pass the screen. I

1 mean you'd pass the screen.

2 CUTLER: We were planning on doing that, really,  
3 with the data we had.

4 RENZI: I was just wanting to point out the  
5 multichemical issue. We don't just screen against  
6 one chemical, one number. We need to look at the  
7 total risk from all the contaminants.

8 CUTLER: Good point.

9 RENZI: I just wanted to clarify.

10 ROBLES: The problem I'm having is that what  
11 you're saying is, anything we detect has to be  
12 thrown in there no matter what level it is.

13 RENZI: That's the way we do the risk  
14 assessment. Yes.

15 LOWE: So is it possible to take this SVOC  
16 data -- sorry, the VOC data that we're going to get  
17 from the next year and use the values for the  
18 detections of SVOCs and metals that we've had from  
19 the RI sampling events and somehow combine those  
20 into a risk number even though they're temporally  
21 varied?

22 RENZI: They are the only data you have. I  
23 think -- I tend to think the data is being collected  
24 with the same -- within the same time frame. I know  
25 we talked about this at our last conference call.

1 You know, if they're within a year or two of each  
2 other. It depends on the groundwater conditions  
3 too. The groundwater conditions change. You do see  
4 a lot of fluctuation in the levels. And that's why  
5 I'm kind of concerned about just dropping things out  
6 of the monitoring program unless you've really  
7 definitively ruled them out as laboratory  
8 contaminants or artifacts.

9 BURIL: That's part of what we'll be able to  
10 present to you here.

11 I'd like to complete the discussion, the  
12 remainder of the things we have on the board there.  
13 And then we do have some information, I think, that  
14 will address exactly what you're talking about.

15 Just as a precursor, a very large portion  
16 of what we're concerned with as far as SVOCs and so  
17 forth did appear to drop out or cannot be  
18 substantiated with repeat samples. So we have that  
19 information. We can show it to you when we get  
20 through this.

21 LOWE: So if we look at this data and it shows  
22 that we have a handful of detections of SVOCs and  
23 metals that are below screening level values, maybe  
24 one value that exceeds it, would it be a wise  
25 decision for us to say it's not worth the money to

1 take another year's worth of data for SVOCs and  
2 metal and to look at some way to try and combine  
3 those?

4 RENZI: I think it would depend on the data  
5 span. Like one hit, one well one time and you never  
6 saw it again or it was ruled out as a laboratory  
7 contaminant. It would depend on the data.

8 BURIL: All right. That's fair.

9 I guess that takes care of the top section  
10 there.

11 I guess one of the questions I still have,  
12 though, is the tributyl tin and where and why that  
13 came up.

14 NAKASHIMA: That was brought to my attention by  
15 Barbara, that this was being found at other sites  
16 and so it was a concern. Apparently it started  
17 widespread usage in the '60s. And from looking at  
18 the letters about the discharge into the Arroyo of  
19 the cooling tower waste waters, the chrome that the  
20 City observed.

21 BURIL: What's the date on that?

22 NAKASHIMA: In the '60s.

23 MELCHIOR: Could Penny speak up just slightly,  
24 please?

25 NAKASHIMA: Okay.

1           So since it was determined that this was a  
2 very highly toxic chemical, then we decided to see  
3 if -- since this was in such widespread usage in the  
4 '60s and it was very toxic, that we decided to look  
5 at it, well, maybe there's a possibility that this  
6 was used at JPL.

7           AMIR: Do you have any documents that you used  
8 or you didn't use, you used other chemicals?

9           BURIL: JPL, NASA and the federal government on  
10 the whole is not in the habit of documenting what  
11 they don't use.

12          BISHOP: The question is: What did you use?

13          AMIR: Do you use something else?

14          BURIL: As far as we know, we only used chromium  
15 compounds, which we have found, although we do not  
16 have documentation to back that up. All we have is  
17 people who worked on the site 30 and 40 years ago.  
18 JPL just doesn't have records that old unless they  
19 were associated with a project and were archived as  
20 a result of being, I guess you could say, of  
21 scientific significance.

22          ROBLES: More importantly is, is it the  
23 agencies' contention that we have to prove we don't  
24 use something?

25          AMIR: No. You don't have to prove. If you

1 have a document that shows that you used chromium  
2 instead of that, then that would be -- but we have a  
3 proposal. We can -- like maybe two or three rounds  
4 of sampling that shows if it is not there, it's not  
5 there, you didn't use it.

6 ROBLES: The concern that I have is, it appears  
7 that we have to prove that we didn't use something  
8 one way or the other. I have a real concern,  
9 because then that opens a Pandora's box; we must  
10 prove that we haven't used any of these chemicals.

11 BISHOP: If I can jump in, because we deal with  
12 this all the time.

13 If you have an operation that in most  
14 industries utilized this type of material, then,  
15 yes, you're in a position of where we assume that  
16 you're using it. Whereas we've mostly done that --  
17 if you're in, you know, if you do metal finishing,  
18 if you do plating, that kind of thing, then you're  
19 likely to have used degreasing chemicals even if you  
20 have no manifest to show that you used degreasing  
21 materials.

22 I think the same would apply if it has  
23 been found, and I'm not -- I don't have this data,  
24 but Penny does, that cooling towers tended to use  
25 tributyl tin and hex chrome for their bio --

1 AMIR: Biocide.

2 BISHOP: Biocide. My mind just went blank.

3 -- and you had cooling towers in the same  
4 time period, it is likely you used the same type of  
5 material if that was the industry standard at the  
6 time.

7 So, yes, in some ways, you're right,  
8 you're being required to do something, but not just  
9 because you're a Superfund site, but because you had  
10 a cooling tower in that same period.

11 ROBLES: Okay.

12 MELCHIOR: Can you guys give a couple of  
13 examples of sites where you found tributyl tin, in  
14 what years the tributyl tin was used?

15 RENZI: This is Barbara Renzi from DTSC.

16 I asked around. And I didn't have a  
17 specific site that's currently being mitigated for  
18 that, but the problem is tin isn't included. It  
19 hasn't been something that's been considered in the  
20 past.

21 It was brought to my attention by somebody  
22 who used to work in the private sector where they  
23 had problems with tin in their cooling tower. It  
24 was an electronic circuit board manufacturer, and  
25 they were concerned about the tin perhaps plating

1 out on some of their equipment causing system  
2 crashes and that sort of thing.

3           And so I started to do a little research  
4 on it. And apparently it was first started to be  
5 used in the early '60s. I tried to get a tight time  
6 frame on when it was used. This -- the early '70s  
7 there were big concerns about its extreme toxicity,  
8 especially in marine environments. They used it a  
9 lot in paints as an antifouling agent in paints.

10           But it was also -- one of its major uses  
11 was in cooling towers. So there was about a 10-year  
12 period there that it was used.

13           MELCHIOR: Tributyl tin is used as a biocide for  
14 marine paint quite a bit. Now, you're sounding as  
15 if this particular group replaced the chromium  
16 because of a concern of plating out.

17           RENZI: I'm not saying that it replaced  
18 chromium. I'm saying that it was used for a period  
19 of time as a biocide in cooling towers, according to  
20 the literature I've read.

21           MELCHIOR: So you don't know if it was in  
22 addition to or in lieu of chromium, then, or just a  
23 completely different compound then.

24           RENZI: I didn't have a reference. I didn't  
25 come across that in my reading one way or the other,

1 whether they were used together or separately.

2 ROBLES: Is there a health risk standard for  
3 this chemical?

4 MELCHIOR: That's pretty tenuous information.  
5 I'd like to see something either --

6 RENZI: From my perspective, if you don't have  
7 records showing what was used in the cooling tower  
8 for a period of time, that means you don't know what  
9 was used.

10 And I had proposed to Penny that perhaps  
11 you look at the areas where the drainage off the  
12 cooling tower was discharged, a monitoring well  
13 associated with where that discharge may have  
14 leached to and restrict the sampling, soil sampling.  
15 You look for the areas where you feel it's most  
16 likely to find it. And in the groundwater, a couple  
17 of quarters from a select number of wells. I wasn't  
18 talking about entire site monitoring. I was talking  
19 about a very focused -- and the real point of that  
20 was to rule out the presence of tin.

21 MELCHIOR: You made a long leap of faith that a  
22 complex module of tributyl tin can move as quickly  
23 as that.

24 RENZI: Excuse me. Move as --

25 MELCHIOR: I recognize your thoughts there in

1 looking at the groundwater, finding it. Why  
2 wouldn't you look right next to the cooling tower in  
3 the soil?

4 RENZI: That's what I meant by a select number  
5 of samples where you'd most likely find it in the  
6 areas of discharge. That's what I was referring to.

7 It's not expected to be very mobile, but  
8 over the course of time it may become -- you lose  
9 the organic groups. It is also soluble in solvents.  
10 It could be co-disposed within the solvents. It  
11 would also leach to groundwater. It's my  
12 understanding that that area of the Arroyo, it's  
13 highly leachable and it has a high infiltration rate  
14 and it wouldn't be surprising to find it in  
15 groundwater if it were discharged.

16 MELCHIOR: I think we understand your thought  
17 process.

18 I guess, you know, if someone would come  
19 to me to show that a particular compound was in  
20 common use, that would be one set of circumstances.  
21 The level of documentation here, whether it be for  
22 the JPL site or any other site, does not appear to  
23 be there. I'm just scratching my head saying, you  
24 know, if some sort of industrial waste water  
25 treatment document was handed to us and said, "Hey,

1 this was common back in the '60s," that would give  
2 us a frame of reference. Right now I have no frame  
3 of reference other than thirdhand hearsay. That's  
4 troublesome.

5 RENZI: We don't see any documentation that  
6 shows -- apparently there's no documentation that  
7 shows what was used in the cooling tower chemicals.

8 I guess my problem is understanding -- I'm  
9 trying to understand the resistance to sampling to  
10 rule this out if it's something that's toxic.

11 LOWE: I think that NASA is trying to --

12 MELCHIOR: It's not resistance. I'm just trying  
13 to understand what's going on here so we can make a  
14 plan. I'm interested in the background.

15 ROBLES: The rationale for it.

16 LOWE: I think NASA has asked in several  
17 conferences to find out more about this chemical,  
18 about what sites you've found this at. If they used  
19 it, did it show up in the groundwater? Did you find  
20 it in the soils, and what concentrations? What is  
21 really the fate and the transport of this  
22 contaminant? Does it persist in the environment?

23 We keep talking about this kind of  
24 generically, "Oh, I think it was this" or "It was  
25 this," but we've never seen anything in writing. I

1 think there are databases, aren't there, that  
2 really, sort of like chemical databases that we can  
3 pull off information about fate and transport and  
4 manufacturers' use and stuff like that.

5 I think maybe this isn't going anywhere,  
6 we should stop and probably assign somebody to do  
7 more research on this chemical.

8 ROBLES: I agree.

9 BURIL: I agree with you completely.

10 ROBLES: The point is, by the same token you say  
11 we don't have data to show we didn't or did use the  
12 chemical. You need to give us a rationale why. And  
13 that's our responsibility.

14 RENZI: I thought if you were out sampling, you  
15 were going to be sampling in these areas, you take  
16 the same soil samples that you're running other  
17 analyses on and you run an analysis for tributyl  
18 tin. I didn't realize this was going to be a  
19 separate, completely different investigation. I  
20 thought it could be incorporated into --

21 NAKASHIMA: It's not a separate investigation.

22 BURIL: Well, part of the problem stems from a  
23 sampling, scheduling, budget consideration, too.

24 Soil sampling, I'm not sure what the cost  
25 is on that.

1           B.G., do you know off the top of your  
2 head?

3           RANDOLPH: No.

4           BISHOP: Well, I don't really think that that's  
5 really an issue, Chuck, because they offered to do  
6 the sampling. It's not a budget or contract point  
7 at this point if they've offered to do it. It's an  
8 issue of: Should you be responsible for doing it,  
9 or should it be done?

10          ROBLES: That's the key question.

11          BURIL: Okay.

12          BISHOP: We've already solved that one if they  
13 offer to do the sampling. It doesn't affect your --

14          BURIL: I would begin to ask questions about  
15 quality control and so forth at that point; knowing  
16 what quality controls they have in place and  
17 depending upon the nature of that quality control,  
18 how all that fits into our program. And if they  
19 find it and somehow through validation it dropped  
20 out, does that mean that we're done, or if there's  
21 no validation done are we still held to it? There  
22 are various other --

23          NAKASHIMA: We'll do the validation.

24          BURIL: -- questions.

25          NAKASHIMA: We'll do the metal core validation.

1           LOWE: Let's look at the time frame here and see  
2 when we have to make this decision by.

3                   When will you be out taking the soil  
4 samples in the Arroyo?

5           CUTLER: B.G. is the soil sampler. We were  
6 supposed to start sampling the groundwater last  
7 Tuesday.

8           LOWE: I think with the groundwater you're going  
9 to sample it on a quarterly basis, so it's not quite  
10 as crucial as the soils.

11           CUTLER: You're not that concerned.

12           LOWE: So maybe we should aim at the soils as  
13 being our critical path for making this decision.

14           BURIL: I guess at the outset, Debbie, I guess I  
15 could agree with that. Except when we get into  
16 groundwater sampling, the amount of time we'd have  
17 to take to do the samples and the cost becomes a  
18 concern as well.

19                   Now, you want to eliminate budget from the  
20 discussion, but it's something that we have to take  
21 into account. Because it's not cheap and it's also  
22 something that, if it's data that is something that  
23 we can't find good rationale for even collecting,  
24 then I have a concern as to why we're going out to  
25 do it.

1           BISHOP: Right. If the focus is the rationale  
2 as being the primary concern, let's concentrate on  
3 that.

4                   If the focus is that we've already got --  
5 it's a budget issue, let's talk about that. Let's  
6 not use both of them at the same time because it  
7 makes it hard for us to talk.

8           BURIL: That's fair.

9           ROBLES: Let's talk about the rationale for it.

10          AMIR: Well, to me, if you believe that you  
11 never used it, so why would it be a concern if you  
12 go out there and sample for tin?

13          ROBLES: We haven't seen it -- have we seen it  
14 in any of our samples?

15          BURIL: No. We haven't analyzed for it.

16          NAKASHIMA: You've never analyzed for it.

17          LOWE: One of their concerns is the time it  
18 takes to collect the volume of sample. I'm not  
19 quite sure how large that is. Is it two liters?

20          BURIL: Five.

21          Cutler: Two for tributyl tin.

22          BURIL: Two for tributyl tin. A total of five  
23 for everything that we have.

24          LOWE: So that's including the metals?

25          BURIL: Yes

1 CUTLER: And the semivolatiles.

2 BURIL: And the semivolatiles.

3 LOWE: Let's set aside the metals for now.

4 BURIL: Okay.

5 LOWE: If you were to add tributyl tin to one  
6 well, would that like double the time, double the  
7 labor time?

8 CUTLER: It more than doubles the current volume  
9 of water we're pulling. For the shallow wells it's  
10 no big deal. But the West Bay wells, when you're  
11 lowering those bottles up and down, it can be an  
12 hour and a half round trip. You're adding at least  
13 two hours to get the tributyl tin sample.

14 And then you multiply that by, I think  
15 there's 60 West Bay screens out there.

16 Anyway, it becomes significant.

17 LOWE: Then to clarify, was DTSC asking for  
18 tributyl tin in all of the groundwater wells? All  
19 screens?

20 AMIR: No.

21 RENZI: Absolutely not.

22 BURIL: That pronounces somewhat of a change  
23 from what I heard you propose before.

24 NAKASHIMA: No. What I said in our phone  
25 conversation the other day, it wouldn't be for all

1 the wells. It would be for the wells that were  
2 downgradient of the observed discharge of the  
3 cooling tower waste waters.

4 Then you brought up the point where you  
5 had a hit of chrome in MW-13 near the current  
6 cooling tower and you wanted to know if that would  
7 include that.

8 BURIL: I'm just going back to your comment,  
9 Penny, that I recall very vividly, and that was that  
10 you needed to have a year's worth of data for all  
11 analytical parameters at all screens before you  
12 could begin to eliminate things.

13 NAKASHIMA: For the SVOCs and the metals.

14 BURIL: Okay. That wasn't clear to me.

15 LOWE: I'm going to write that all down so it's  
16 all clear.

17 And then with the tributyl tin, would you  
18 only be looking at shallow wells, or would there be  
19 specific West Bay wells that you would be interested  
20 in, Penny?

21 NAKASHIMA: I'm looking at the wells in the  
22 Arroyo. Apparently there's two that are West Bay  
23 wells and there's --

24 BURIL: Penny, I'm looking at the comment letter  
25 that you sent, under number 2, the addenda, number 2

1 under the section Addenda Field Sampling and  
2 Analysis Plan. It says "The analysis of groundwater  
3 sample should include SVOCs, all Title 22 metals,  
4 and tributyl tin." Then you address the rationale  
5 question.

6 Are you saying now that you're changing  
7 that to limit the amount of tributyl tin?

8 NAKASHIMA: I'm clarifying that the tributyl tin  
9 is just for certain wells.

10 AMIR: That was a draft. This is the final  
11 discussion.

12 BURIL: That's fine. It's a concern, obviously,  
13 because we were unclear about what's happened.

14 LOWE: I'm trying to clarify what DTSC is asking  
15 for in terms of the groundwater sampling. I have  
16 for tributyl tin you're looking at only the specific  
17 wells that are downgradient of the discharge area  
18 for the cooling towers. I got there that there were  
19 two in the Arroyo, which are West Bay wells that  
20 DTSC were concerned about.

21 Were there more?

22 NAKASHIMA: The others are the shallow wells.

23 LOWE: And how many shallow wells are there?

24 CUTLER: There's 10.

25 NAKASHIMA: There's 10 in the Arroyo?

1 CUTLER: There's no shallow wells in the Arroyo  
2 at all.

3 Which two in the Arroyo were you looking  
4 at? First of all, there's only one in the Arroyo.

5 NAKASHIMA: Okay. One in the Arroyo.

6 BURIL: What are you defining as "the Arroyo"?  
7 Because we have a series of wells along the edge of  
8 JPL that aren't technically in the Arroyo. But  
9 maybe you're thinking about those as well. I don't  
10 know.

11 AMIR: We can name the wells.

12 BURIL: That would be helpful.

13 AMIR: Let's do that.

14 NAKASHIMA: I don't know if that's the  
15 complete --

16 NIOU: Do you want to look at this?

17 LOWE: I had a question for Foster Wheeler. You  
18 were saying for each West Bay well it would add two  
19 hours, two additional hours of labor to sample all  
20 screens?

21 BURIL: No. Each screen.

22 LOWE: Per screen.

23 CUTLER: You don't always get full bottles. It  
24 may take three runs, round trips, to fill two  
25 liters. Then it's more like three hours.

1           LOWE: Each West Bay well has five screens,  
2 right? So how many hours are we adding for each  
3 West Bay well?

4           CUTLER: 10 to 15. Now, that's just in  
5 sampling. But, yes. 10 to 15.

6           LOWE: Labor time.

7           CUTLER: We have a total of --

8           BISHOP: We don't know what the total is yet.

9           CUTLER: We have 10 West Bay wells right now.

10          BURIL: That number may be narrowed, depending  
11 upon what --

12          LOWE: But we're only talking about tributyl  
13 tin, so we're only talking about these two wells.

14          BURIL: That's what we want to figure out.  
15 Because she's saying shallow wells as well. The  
16 labor is not an issue.

17          LOWE: The next question for Foster Wheeler is  
18 with the shallow wells, how much additional time are  
19 we talking?

20          CUTLER: 30 seconds.

21          BURIL: Labor is not an issue on the shallow  
22 wells. They've got those little two-inch Grundfos  
23 pumps in there and they just pull it out.

24          NIOU: Maybe DTSC can even eliminate some time  
25 for some screen levels, maybe.

1           LOWE: I think one compromise might be to, in  
2 the first round, allow DTSC to take samples for the  
3 shallow wells and then if we get any detections, I  
4 don't think JPL would argue that we need to do it in  
5 the other wells too.

6                   And then also, there's a question if DTSC  
7 thinks this would be found deep, maybe we would only  
8 do the first screen of the deep West Bay wells.

9           CUTLER: There's a lot of possibilities. That  
10 will help.

11           LOWE: I'm just trying to propose some  
12 compromises here.

13           BURIL: Which shallow wells? Let's see what  
14 we're talking about.

15           CUTLER: 13.

16           BISHOP: 13 is where you had the chromium hit.

17           BURIL: We know that's a potential problem right  
18 there.

19           LOWE: So for Foster Wheeler, you guys never  
20 answered my question about soils. When are you  
21 going to start your soil sampling?

22           BURIL: It's not scheduled until October right  
23 now, is it, B.G.?

24           RANDOLPH: Until the schedule is solidified and  
25 the contractual negotiations are solidified, we

1 don't know. But the earliest we can possibly  
2 envision right now would be mid October.

3 LOWE: Okay. Thank you.

4 BURIL: The schedule as it's currently set right  
5 now would be sometime in October, Debbie.

6 AMIR: How deep is MW-12?

7 BURIL: 12 is a multi-port well.

8 RENZI: What's the depth of the first screen?

9 CUTLER: It's 135 to 45 feet below surface.

10 LOWE: So another question for Foster Wheeler.  
11 When would be the first groundwater sampling event  
12 that happens after the new wells are put in?

13 BURIL: That's not until January.

14 CUTLER: It's currently scheduled for March.

15 ROBLES: March '97?

16 CUTLER: March '97. That's on the current  
17 schedule.

18 ROBLES: On the current schedule.

19 BURIL: I think you're right. I've got the  
20 current schedule. It would be the first RI event  
21 we're talking about. Right?

22 CUTLER: Right.

23 LOWE: Another question for Foster Wheeler. We  
24 talked about having full sets of data.

25 CUTLER: That's March.

1           LOWE:  Sorry.  Thank you.

2           BURIL:  The actual sampling, the field work  
3 begins end of January for the first RI event.  The  
4 data wouldn't be available until March.

5           LOWE:  That wasn't my question when the data is  
6 available.  My question was when you start the  
7 groundwater sampling.

8           BURIL:  The actual sampling would be end of  
9 January.

10          CUTLER:  That's right.  We start before the  
11 wells are in, and then the other three are done.

12          BURIL:  We follow right behind.

13          ROBLES:  Okay.  Next question.

14          LOWE:  So when you're starting -- we talked  
15 about feeding into the RI a full set of data on all  
16 wells for VOCs.  And so that first full set of data  
17 would be January.

18          BURIL:  That's when we collect the samples.

19          LOWE:  The second round of VOC data that goes  
20 into the RI -- into the risk assessment would be  
21 March.

22          CUTLER:  A quarter later.

23          NIOU:  According to the schedule, the wells will  
24 be installed and completed in March of '97.

25          CUTLER:  The new wells.

1           NIOU: New wells complete in March of '97.  
2 Therefore, the next groundwater sampling event is  
3 May of '97.

4           CUTLER: No. The way we've got that set up, to  
5 compress the schedule, we have 60-some screens on  
6 site already. We're going to start those in January  
7 while the new wells are being installed. The  
8 timing, hopefully, when those new wells are  
9 installed, they're the last wells to get sampled.

10          NIOU: I see. Okay. That makes sense.

11          BURIL: The actual field work, Stephen, takes  
12 almost two months.

13          CUTLER: Right.

14          NIOU: Okay.

15          LOWE: So this changes my view of what the  
16 critical path is because I think what DTSC is  
17 looking for is to have tributyl tin sampled in the  
18 October soil samples and in this January and April  
19 groundwater sampling event. I think that is more  
20 critical to them than having it in this one that was  
21 supposed to start last week.

22          BURIL: Is that true?

23          LOWE: Because these are the two ones -- January  
24 will be the first round of groundwater sampling that  
25 will include the new wells.

1           ROBLES: That goes into the risk assessment.

2           LOWE: And these are the two sampling events  
3 that are going to feed into the risk assessment as  
4 full sets of data. Then we're only looking at the  
5 past data to fill in data gaps. Like if you  
6 suddenly have nondetection of a well, I think Foster  
7 Wheeler said they would go back and look  
8 historically to see if they had detections. So I  
9 think these are the most important two sampling  
10 events.

11           ROBLES: That's a good point. It is. That's  
12 great.

13           BURIL: I can't argue that.

14           ROBLES: That's correct.

15           CUTLER: Whether they want it quarterly for a  
16 year, too.

17           BURIL: That's the only kicker. This is what's  
18 identified.

19           CUTLER: Quarterly for the first year.

20           BURIL: They're modifying that now.

21           ROBLES: They can start it in January. It's  
22 more prudent that way.

23           AMIR: Let's talk about what we are talking  
24 about right now, not the past. Okay. We are  
25 changing it.

1 BURIL: That's what we're waiting to hear.

2 AMIR: Because of this discussion, we're  
3 changing it.

4 BURIL: That's fine.

5 LOWE: I believe I heard them say earlier that  
6 two or three sampling events for tributyl tin would  
7 be sufficient. And we haven't talked about SVOCs or  
8 metals yet.

9 BURIL: No. Right.

10 LOWE: Let's keep those separate for the moment.

11 RENZI: From what I've read about the mobility,  
12 it's not very mobile, but I don't know what the  
13 organic content is in the soils, if it's going to  
14 hang up in the soils or if it's fairly sandy it  
15 would leach more readily.

16 CUTLER: It's very insoluble.

17 MELCHIOR: Yes.

18 RENZI: I'm actually more concerned about soil  
19 sampling at the point of discharge, and we're just  
20 trying to figure out which wells.

21 I think the well -- is it 13 that has the  
22 chromium?

23 NAKASHIMA: Right.

24 AMIR: 13.

25 RENZI: The most shallow interval, screen

1 interval.

2 BURIL: That's a standpipe well. That's a  
3 shallow well. We can sample that very easily.

4 RENZI: Sample that one.

5 I'm not sure if it would be -- 12 would be  
6 worth --

7 BURIL: Let me offer a suggestion when you're  
8 looking at 13 as an indicator. That cooling tower  
9 that is associated with Well 13, that has been there  
10 since the early '50s. It may be that if we want to  
11 screen for tributyl tin, knowing that that  
12 particular location appears to have used chromium  
13 already, that it may be a reasonable point to at  
14 least look to see whether or not tin might have been  
15 used at that location as a screening.

16 RENZI: That's exactly our rationale. That's  
17 what we were looking for. We were trying to figure  
18 out which wells would be the most indicative.

19 BURIL: That makes sense.

20 RENZI: I think 12 may be screened too deep.  
21 The first interval may be too deep for tributyl tin.

22 BURIL: Anything you're going to be looking at  
23 that's anything significantly below water table is  
24 probably going to be way too deep just based on what  
25 I'm hearing, if it's as immobile as what I think I'm

1 hearing from you folks. Just my own rudimentary  
2 knowledge of organic chem tells me it's going to be  
3 an exceptionally immobile compound. It probably  
4 won't leach much at all.

5 NAKASHIMA: Except that it's very soluble in  
6 solvents.

7 RENZI: But you wouldn't expect solvents to be  
8 used.

9 BURIL: I wouldn't expect solvents to be used in  
10 a cooling tower, no.

11 NAKASHIMA: In the discharge areas.

12 RENZI: Yes, in the discharge area.

13 RANDOLPH: I would like to mention one thing  
14 about discharge areas. The chrome discharge that  
15 was reported was only at one place, and that was at  
16 the south end of the Southern California substation.

17 RENZI: Where is that?

18 RANDOLPH: Right down near MW-4.

19 BISHOP: Which, my memory, is where the boring  
20 is to be put in?

21 BURIL: That's exactly right.

22 RANDOLPH: Correct.

23 AMIR: We have to take a look at all the data  
24 and see which points we want to sample for soil  
25 sediments.

1       ROBLES:  Let's make that an action item.

2       BURIL:  Okay.

3       ROBLES:  The number of wells.

4       RENZI:  I think using Monitoring Well 13 as an  
5 indicator well for groundwater because of the  
6 presence of the chromium which we know was  
7 associated with your --

8       BURIL:  That makes sense.  How many times would  
9 you anticipate wanting that sampled, and so forth?

10       RENZI:  I think just a couple of quarters.  I  
11 think, Chuck, my main concern is no one has ever  
12 looked for it.  This is simply to rule it out.  I  
13 mean, I'm hoping we don't find it.

14       BURIL:  You and me both.

15       RENZI:  In fact, as I read a little more about  
16 this, I was kind of alarmed that tin wasn't a normal  
17 component as part of a discharge -- or a monitoring.  
18 But apparently once they realized how toxic the  
19 material was they stopped using it almost  
20 immediately.  I mean, the use was really restricted.  
21 So, in fact, it was "You will not discharge any  
22 materials that have tin in them."

23                So I was just concerned about that 10-year  
24 period where everyone said "Look at this stuff, it  
25 works great."

1 BURIL: Sure. It kills everything.

2 RENZI: Yeah. So this is really an exercise to  
3 rule it out. It's not -- I don't want to see it  
4 incorporated as a long-term, broad-spectrum  
5 monitoring plan if we can --

6 BURIL: Okay.

7 RENZI: I wouldn't expect it to have moved very  
8 far if it were used.

9 LOWE: I think there are two ways we can go with  
10 this. It looks like Foster Wheeler is going to be  
11 starting a groundwater sampling event very soon, and  
12 I think that if DTSC wanted to take samples on the  
13 shallow wells, that JPL might allow that for the  
14 sampling event.

15 BURIL: We would have to caucus on that one.

16 LOWE: Caucus on that.

17 The second option is to focus on this  
18 January sampling event and to give people homework  
19 assignments to go find more information on tributyl  
20 tin and where it's been used, what sites it's been  
21 found at, that kind of stuff, and focus on trying to  
22 resolve it before January.

23 ROBLES: On the caucusing that we have to do, I  
24 have one question on that. Are you going to sample  
25 according to our quality assurance plan or according

1 to your quality?

2 AMIR: We suggest it, but if you are willing to  
3 sample, then we would rather you sample for it.

4 ROBLES: The question is --

5 AMIR: But if we do, yes.

6 NAKASHIMA: We would follow yours.

7 ROBLES: Okay.

8 NAKASHIMA: So that everything would be  
9 consistent.

10 BURIL: Let me be sure I understand, then,  
11 because I just want to be sure I talk about the  
12 right thing.

13 On the tributyl tin, we're talking about  
14 utilizing Well 13, and I think we all can understand  
15 the rationale there because of the chromium, and so  
16 forth, and the cooling tower being right there.

17 When we would sample, I'm not clear on. I  
18 guess, Debbie, you were thinking maybe at this next  
19 one that we were ready to go into, or were you  
20 thinking in the January time frame?

21 LOWE: I'm thinking that we can focus on this as  
22 being our significant time frame. But if we're all  
23 thinking that if we're going to find it, it's  
24 probably going to be in Well 13, it wouldn't hurt to  
25 have DTSC go out there and take a sample when you're

1 out there sampling at 13 in the next couple weeks.

2 If we don't have it there --

3 BURIL: Maybe the whole thing goes away.

4 LOWE: It gives us something more to think about  
5 in our planning. So I just threw that out as an  
6 option to try and go for 13, or maybe 13 and a  
7 couple more shallow wells in the next quarter.

8 But in terms of trying to deal with this  
9 10 to 15 extra hours that it takes to sample the  
10 West Bay, I don't want to try and resolve that  
11 before this next sampling event. We'd have to focus  
12 on January for that.

13 BURIL: All right.

14 ROBLES: Okay. Good point. I think we've  
15 discussed it.

16 BURIL: I guess we're probably in a position to  
17 take a step back and see what we're talking about.

18 ROBLES: We've got to take a step back.

19 LOWE: We can either break up and try to caucus  
20 a little bit today and come to resolution on this.

21 BURIL: I'd like to try.

22 ROBLES: Let's do that now.

23 BISHOP: I think we have another room over here.  
24 Let's see if it's open.

25 BURIL: That would be great.

1                   We'll still need to talk about the SVOCs.

2           MELCHIOR: Are you guys going to stay in that  
3 room?

4           BURIL: I'm going to ask if JPL can stay here  
5 because, Dan, you're on the phone with us here.

6           NAKASHIMA: B.G., did you happen to bring your  
7 aerial photos with you?

8           RANDOLPH: I sure did.

9           BURIL: We did. And we've got the ones here as  
10 well, the ones in the book.

11          ROBLES: Do you want to see it?

12          BURIL: Penny, do you want to see it now?

13          NAKASHIMA: Yes.

14                   (Discussion held outside the record.)

15          LOWE: I want to see this research on tributyl  
16 tin happen before we make a decision about the  
17 October sampling event and the January-April. And I  
18 think that NASA/JPL can just go ahead with the  
19 schedule that I have because in the event that we do  
20 sample for those two things, it looks like DTSC is  
21 going to do it. So it's just a matter of how to  
22 integrate that into your RI and it's not an issue of  
23 contracting or additional time for your sampling  
24 team.

25          RANDOLPH: I think it's very, very important

1 that the homework be done because I haven't been  
2 able to find any evidence anywhere from any of the  
3 research that I've done that tributyl tin has been  
4 found from an old, old discharge into soil and it's  
5 remained, because it degrades very quickly.

6       LOWE: That's the thing that I've been asking  
7 for a while and no one has ever told me, was the  
8 fate and transport.

9       BURIL: That's what we have to find out.

10       LOWE: I'd like to see people, instead of saying  
11 these things in meetings, come to me with your  
12 research.

13       ROBLES: We've got to back it up with  
14 documentation.

15       BURIL: Let's document it. Let's do the  
16 research. Let's try to get the research done before  
17 October.

18       LOWE: I'm going to assign specific names to  
19 this, so be prepared.

20                   (A recess was taken from  
21                   11:20 A.M. to 11:50 A.M.)

22       BURIL: All us kids sat around and talked about  
23 the thoughts that we had here, and I just want to be  
24 sure that we understand what you have on the table.  
25 And, if we are in understanding, we have consensus

1 on this, then I think we'll be in good shape.

2 For the groundwater. Now, this is not a  
3 final decision. This is kind of the interim up to  
4 the point where we actually get into the RI, is the  
5 way I look at it. But we're talking about sampling  
6 MW-13 for tributyl tin. We'll start it in July.  
7 Not a problem. JPL will do it. We'll sample it.  
8 We'll analyze it. We'll do the QC. No problem.

9 LOWE: Can you write "July" on there?

10 BURIL: Okay.

11 ROBLES: Yes. That's good.

12 BURIL: Someone in our happy group will --

13 LOWE: Before you move on, can you go through  
14 that last line, "QA/QC one time," what you mean?

15 BURIL: This would be sample. At this point in  
16 time we're looking at this sample at MW-13 as being  
17 a one-time, one-shot screening. See what we get, do  
18 the research that we need to do. Then on the basis  
19 of that information we determine our course of  
20 action for the January/April samplings.

21 If that's acceptable to everybody, JPL is  
22 ready to step up to it.

23 ROBLES: The reason for that is from the  
24 original letter you stated, which now you say does  
25 not apply, we assumed you wanted a full round of

1 sampling on every well for tin. Now, because the  
2 scope is much, much smaller and much easier to deal  
3 with, there is not a major cost change nor a major  
4 scope change, that makes it easier for us to do.

5 AMIR: Okay.

6 ROBLES: That was the concern we had. We  
7 understood from your letter that is not valid  
8 anymore.

9 AMIR: It wasn't clear.

10 ROBLES: Right. Because we thought you wanted a  
11 full round, four samples, every well.

12 BURIL: I think, based on what I understand,  
13 that may still be a TBD based upon the data we  
14 generate with the research and the data we get from  
15 MW-13. Whether we have to go to more wells,  
16 et cetera, in the future is something that we'll be  
17 determining, and which wells they are. I hope you  
18 folks might have some understandings that we might  
19 be able to share today.

20 NOVELLY: But if we expand it, it will be a  
21 scope change and we'll have to renegotiate.

22 BURIL: Right. We'll have to renegotiate what  
23 that means and talk about the impacts at that point.  
24 So the sooner we can identify it the better, which  
25 is why we want to do it in July.

1 AMIR: Okay.

2 ROBLES: What's been discussed here is not a lot  
3 of cost for us. It's easy for us to do it.

4 BURIL: It's easy for us to do if we're talking  
5 about this level of effort. So we'll do it.

6 NIOU: Just one screen.

7 BURIL: Yes. That's all there is.

8 NIOU: Just one screen. Okay.

9 LOWE: I expanded on the scope of your research,  
10 and I think maybe we might want to split this up.  
11 There might be some parts of it that both people  
12 want to do, everybody wants to do. But historical  
13 manufacturing usage, when was it used, fate and  
14 transport, example sites, concentrations we found in  
15 the soil and groundwater, and then also toxicity,  
16 both human health and eco. The eco I guess would  
17 only be for the soil.

18 BURIL: Can you note that on there, Debbie?  
19 Eco, soil only.

20 Is there a need for us to do soil for  
21 human health, or are we only concerned about the  
22 groundwater?

23 RENZI: It would be a human health issue if it's  
24 in soil, assuming there's --

25 BURIL: That's fine.

1           RENZI: It would be part of the risk assessment.  
2 Whether or not it's a complete pathway is another  
3 issue. But yeah.

4           LOWE: So does anybody want to sign up for any  
5 of these?

6                   I'm going to put Barbara down for the  
7 toxicity.

8           RENZI: What are you looking for? A summary?

9           LOWE: I think the information that you were  
10 sharing with us in the other room, that would be  
11 useful for people to have copies of that.

12           RENZI: Okay. Of the whole document, or just  
13 the pertinent -- do you want me to prepare a  
14 summary? I didn't know what you were looking for.

15           LOWE: Pertinent sections.

16                   And I will talk to Dan, also, about this.  
17 So I'll put myself down for it also.

18           BURIL: Under example sites, personally I think  
19 I'm going to have to rely on the regulatory agencies  
20 because, based on what I'm hearing from Foster  
21 Wheeler and my own experience, we don't know  
22 anything about it.

23           LOWE: I just assigned that to DTSC.

24                   Fate and transport?

25           MELCHIOR: Are we looking, Chuck, for volunteers

1 for that?

2 BURIL: Yes.

3 MELCHIOR: I think we ought to look at the fate  
4 and transport element of that.

5 BURIL: Done.

6 LOWE: I know that I have a database that has  
7 access to this kind of information.

8 BURIL: Historical stuff?

9 LOWE: Yes. So I'll try that.

10 BURIL: EPA will take that one.

11 LOWE: If there's anyone else who I'll assign  
12 that to Foster Wheeler also.

13 RENZI: All I pulled out was the Merck Index or  
14 chemical encyclopedia and it was early '80s edition.

15 BURIL: If we can find something, fine.  
16 Otherwise, we'll do what we can.

17 LOWE: It's worth having more than one person  
18 look.

19 BURIL: Sure. That's fine.

20 LOWE: Do we want to assign a date for this?

21 BURIL: I would say it absolutely has to be  
22 between now and, say, the end of August, mainly  
23 because we need to make a decision based on data  
24 that we'll have coming back to be able to address  
25 things that we'll be starting in October.

1           LOWE: Why don't we aim to have people who  
2 signed up on here to get things to other parties by  
3 mid August, August 15th.

4           BURIL: That's approximately a month.

5           LOWE: Then we'll look at --

6           BURIL: What's four weeks from today?

7           MELCHIOR: Today is the 19th.

8           ROBLES: August 16th is four weeks from today.

9           BURIL: If we have it to everyone come the 16th,  
10 which is a Friday, I think we can live with that.

11          ROBLES: Close of business Friday, the 16th.

12          AMIR: How about the end of August?

13          ROBLES: You want the end of August?

14          AMIR: Yes.

15          ROBLES: The 23rd or the 30th?

16          AMIR: 30th.

17          NAKASHIMA: 30th.

18          AMIR: 30th.

19          BURIL: Debbie, one thing I'd like to ask, also,  
20 since DTSC had some historical information,  
21 apparently, that we assign them that historical part  
22 as well.

23          LOWE: Done.

24          ROBLES: So DTSC wants to do it by the 30th of  
25 August, which is the --

1 BURIL: That's Labor Day weekend.

2 RENZI: Is that in lieu of Foster Wheeler?

3 BURIL: No. That's in addition to.

4 LOWE: I guess that's for everybody.

5 BURIL: We'd like to get as much information on  
6 this as we can.

7 ROBLES: Debbie, that's going to be difficult  
8 because that's Labor Day weekend.

9 BURIL: Here is my thought, folks, in terms of a  
10 schedule for this. If we go with the 16th, that  
11 gives us a couple of weeks to look at it and we can  
12 meet in early, early September, like the first week,  
13 to talk about what we're going to do on things in  
14 October. If we wait until the end, that pushes us  
15 right up to the point where we're actually going to  
16 be in the field sampling, and that's too late for us  
17 to be making changes. I think it would be better  
18 for us to stick with the 16th date so we give  
19 ourselves some time to be able to make any changes  
20 we might want to make in the soil part of it.

21 NAKASHIMA: You'll be sampling in October?

22 BURIL: Current schedule says we'll be sampling  
23 soils in October. Now, we haven't discussed what we  
24 are going to do. But if this research is going to  
25 have an influence on it, we have to have the data up

1 front.

2 NAKASHIMA: I'm just thinking it's a conflict.  
3 It's going to be pretty tight for me with August --

4 ROBLES: Can we split the difference? The 23rd,  
5 which is the week after, between the 30th and the  
6 16th? If we can get it the week of the 23rd. The  
7 23rd is a week from the Labor Day weekend.

8 BURIL: It's a Friday.

9 ROBLES: It's a Friday.

10 LOWE: Maybe you should ask Jon to help you out  
11 here, Penny.

12 NAKASHIMA: I'm just thinking about reviewing  
13 everything before, because that last week of August  
14 I won't be able to actually look at it until the  
15 first week in September, myself.

16 AMIR: Can you help us out?

17 RENZI: I can help you out.

18 LOWE: This date was not a date we were going to  
19 meet and talk about it.

20 ROBLES: No. It was just to get the  
21 information.

22 BURIL: It was to get the information to people.

23 ROBLES: That's all. Just get the information  
24 out to people so that we can have a meeting in  
25 September.

1       LOWE: So the 23rd would be five weeks to find  
2 the information and get it out to everybody.

3       ROBLES: Can we all agree on that? The 23rd?  
4 Okay. 23rd.

5       BURIL: All right. Looks like it's done.

6       MELCHIOR: To have the data transmitted?

7       BURIL: To have the data transmitted by the  
8 23rd. Correct.

9       MELCHIOR: Of August.

10       BURIL: Of August. Yes. If I said July I think  
11 B.G. would smack me.

12       MELCHIOR: You're being too kind these days,  
13 Chuck.

14       LOWE: So the only thing I'll add to this last  
15 one is that before the end of the day we'll set a  
16 next meeting date to talk about this and decide  
17 this.

18       ROBLES: Right.

19       BURIL: Now, here is something that I'm not sure  
20 how to deal with. We've got a couple of questions  
21 on the back side of this that I want to add onto  
22 this.

23               A couple of questions that we had in  
24 trying to resolve this. I think up to the  
25 October/January time frame we've got an

1 understanding. But which wells in January/April  
2 time frame are we talking about, assuming that we  
3 are going to do it for tributyl tin?

4 We need to know specifically because that  
5 changes our scope, changes our labor, changes a lot  
6 of things that we just need to be able to take  
7 account for.

8 RENZI: That's assuming you find it in 13?

9 BURIL: That's assuming that we're going to go  
10 ahead and do it on those times. I'd like to take  
11 the opportunity to say I've got five months,  
12 approximately, to make whatever changes I need to if  
13 it turns out to be a significant contractual issue  
14 or something like that. If I know what I'm dealing  
15 with up front I can begin, at least, the process.  
16 If I don't know until January, I can't do a thing.

17 RENZI: It would say wells downgradient of 13.

18 BURIL: Can you give me the numbers?

19 RENZI: I don't have a map.

20 BURIL: Specific well numbers is what I need.

21 LOWE: I think it might depend, Chuck, on if we  
22 find like a horrendously high hit, then we may need  
23 to start --

24 BURIL: Okay. I'm not saying I need it right  
25 this second. What I'm saying is at our next

1 meeting --

2 RENZI: Oh, questions to be answered --

3 BURIL: Yes. I'm sorry.

4 AMIR: We thought you wanted it right now.

5 BURIL: No. It would be nice, but I think you  
6 guys probably need to think about it and maybe look  
7 at the data we get from the other stuff, which is  
8 fair.

9 RANDOLPH: I think we need to be a little bit  
10 more careful about everybody talking over each other  
11 because I'm sure Louise is having a very difficult  
12 time transcribing this.

13 BURIL: The second thing that I have question  
14 on, based on the discussion that we've had thus far,  
15 and this will actually extend to all the things that  
16 we do not come to resolution on today, is how do we  
17 formalize this at this time? We have the addenda  
18 out there. They went to draft-final. We're  
19 prepared to change them. But how do we deal with  
20 changes that may come about as a result of future  
21 decisions, and so forth? I'd like to try and  
22 understand the process and the procedure that we  
23 need to go through because that's something that we  
24 need to be able to have laid out.

25 Maybe this is something we can talk about

1 at another meeting. I don't know. Maybe this is  
2 not the time or place to try and lay the procedure  
3 out.

4 AMIR: Right.

5 BURIL: But I'd like everyone to please think  
6 about this because going back and redoing documents  
7 each time becomes a very cumbersome effort for us.

8 ROBLES: I think we need to focus on a meeting  
9 talking about procedure.

10 BURIL: In fact, what I'd like to offer up is  
11 that sometime within the next few weeks, and I won't  
12 try to push a schedule now because I don't think I'm  
13 prepared to do that, but what I'd like to do is to  
14 have a meeting with all the RPMs, contractors aren't  
15 needed unless you want to bring them, and just  
16 basically talk about what process, what procedures  
17 we should be dealing with. I'm talking about  
18 changes like this.

19 We have this dynamic process that's going  
20 on. We can identify how we're going to do this in  
21 the future and the kind of time frames and so forth  
22 that are going to be needed by everybody to  
23 accomplish what we are trying accomplish in  
24 formalizing this stuff, and a variety of other  
25 things like that. I think it would be very

1 beneficial for us just to talk about that.

2 ROBLES: Maybe also discuss the inner working  
3 processes about things happening within each of our  
4 organizations, that we come to a decision, the  
5 inputs and how we can help each other so that it  
6 could make it easier so that we don't go through  
7 this. We have an understanding and there's changes  
8 and so on. We understand everything is in flux  
9 anyway. This is a dynamic system. But we want to  
10 streamline it or facilitate each other, so therefore  
11 we don't go through this.

12 Because my biggest concern is down the  
13 road, as things change, as health risk information  
14 comes in, as new chemicals are added or subtracted,  
15 or what have you, what is the implication, how do we  
16 handle those things. New issues that come up, new  
17 guidelines that the State and the feds may have, the  
18 new direction that we get.

19 BURIL: Or public inquiry and comment down the  
20 road. We'd like to have all those processes, not  
21 necessarily each one of those facets, but understand  
22 the general process by which we can address those  
23 kinds of things.

24 ROBLES: Does that sound feasible?

25 AMIR: I'm just surprised that you haven't got

1 used to the changes.

2 BURIL: One thing I will do is -- unfortunately,  
3 Debbie, I was going to suggest a location down here.  
4 The location that I would offer up is that Cal Tech  
5 does have a private club that is really quite nice  
6 and has several meeting rooms. I term that neutral  
7 ground because it's not associated with any one  
8 entity per se. I'd be happy to have you all come  
9 there.

10 LOWE: I think it's a good idea, Chuck. I think  
11 that maybe we want to focus on trying to resolve a  
12 lot of the issues on the table right now first.

13 BURIL: I agree. This is just to lay it out, to  
14 say think about this. That's all. That's really  
15 the end of the discussion for the next meeting.

16 LOWE: In terms of how do we formalize what we  
17 decide today, there's a couple ways we could do it.  
18 One thing I'll just throw out there is to have  
19 somebody take the lead and try and use the notes in  
20 these flip charts, to come up with some sort of  
21 consensus statement on what we've agreed upon and  
22 then fax it out, and then at the next meeting we can  
23 all sign it.

24 BURIL: Let me offer kind of an add-on to that  
25 thought, and that is that if we take these and

1 summarize them, have them typed up in some fashion  
2 and taking the meeting minutes, submit those out in  
3 the same time frame that we normally do, and have  
4 you review those, be sure that the statements on the  
5 handouts or the flip charts adequately portray  
6 what's going on and that the discussion within the  
7 meeting minutes is sufficiently detailed to be sure  
8 that we all understand where we're coming from,  
9 let's just let those act as the formalization at  
10 this point so we can move forward.

11       LOWE: I'd like to take it one step further and  
12 have somebody take the lead on pulling stuff out of  
13 here and break it up into agreements.

14       BURIL: We can do that.

15       LOWE: And action items.

16       BURIL: Okay. I'll offer myself to do that.

17       LOWE: I've tried to put what I see as action  
18 items in red. That's why you notice the difference  
19 between the black and the red.

20       BURIL: That's good. I'll offer myself to do  
21 that.

22       RENZI: Chuck, I have -- this was something that  
23 Penny had faxed to us, a letter from Foster Wheeler  
24 that I think documented a conference call. I think  
25 you -- I'm not sure who prepared it. But it talked

1 about -- it numbered the issues, what the discussion  
2 was, what the conclusion was and then what remaining  
3 questions were. I thought -- it was for me for  
4 review as to what some of the discussion issues were  
5 was very helpful. I don't know if that's the kind  
6 of format or communication you were looking for.

7 BURIL: Jon, you would rather do that?

8 BISHOP: I'll take care of that for you.

9 BURIL: Fine.

10 LOWE: So the consensus statement is yours, Jon?

11 BISHOP: Yes. I might as well have something up  
12 there.

13 LOWE: Thank you, Jon.

14 BURIL: Okay. That's fine.

15 I guess we're up to questions on soils  
16 now.

17 LOWE: Okay.

18 BURIL: On tributyl tin. And then we're off to  
19 the races on the rest of it.

20 BISHOP: Actually, I thought we still had the  
21 discussion on the SVOCs and metals.

22 BURIL: Okay. Do you want to break it down by  
23 media or by constituent? That's the only thing I  
24 was going to ask.

25 ROBLES: I think it was tributyl tin, soil and

1 then the metals.

2 BURIL: Six of one, half dozen of the other.

3 LOWE: Actually, I want to go back to this page  
4 and look at our timing again because I'm thinking  
5 that before we make decisions about soil, which  
6 needs to be made definitely before mid October, that  
7 we all want to do our research.

8 BURIL: That's right.

9 LOWE: So maybe it's not worth talking about it  
10 today.

11 ROBLES: Okay.

12 BURIL: On tributyl tin, you mean?

13 LOWE: For tributyl tin.

14 ROBLES: In the soils.

15 LOWE: In the soils.

16 ROBLES: That's a good point. Okay. So then  
17 let's go to the SVOCs.

18 BURIL: Now, Mark, you gave me that table and I  
19 hope I brought it along, the one on the differences,  
20 the changes that we had one to the other.

21 CUTLER: The one right there?

22 BURIL: Yes. That's it.

23 So then if we focus on the groundwater  
24 portion of it, then --

25 LOWE: Groundwater and what?

1 BURIL: In other words, if we're going to table  
2 the discussion on soils, because I think the only  
3 issue that we had there - B.G., correct me if I'm  
4 wrong - the only issue we had there was the tributyl  
5 tin, wasn't it?

6 RANDOLPH: In addition to metals --

7 BURIL: The Title 22 metals?

8 RANDOLPH: Actually, it's Title 26 metals, not  
9 Title 22.

10 BURIL: Okay. How do you want to approach this?  
11 We can finish off the groundwater and then discuss  
12 soils other than tributyl tin.

13 BISHOP: Sure. Let's do that.

14 BURIL: Why don't we do that.

15 BISHOP: I have one thing to throw out to start  
16 this off. Maybe that will help clarify the issues,  
17 or maybe it will just confuse it more.

18 I went back and looked at the sampling  
19 analysis plan to just take a look, because my  
20 understanding was this addendum was to use the  
21 sampling analysis plan that we had already passed  
22 and just make an addition to it. When I went back  
23 and looked, the SVOCs and Title 26 metals were  
24 included in the groundwater sampling in all the new  
25 wells, is that correct, for the past wells when we

1 drilled them?

2 CUTLER: And they were.

3 BISHOP: And they were.

4 So the addendum for the three new wells  
5 only has VOCs, right, and chromium? Is that  
6 correct?

7 CUTLER: Right. Because the only reason we're  
8 installing those wells was to --

9 BISHOP: Delineate --

10 CUTLER: -- find the VOC plume. That was the  
11 data gap that was found.

12 BISHOP: Right.

13 BURIL: I believe, without going to the notes  
14 themselves, I believe in our January meeting this  
15 year that we reviewed that and came to consensus  
16 that we could use the past data to say that SVOCs  
17 and the metals, with the exception of chromium  
18 because of the concern we saw at Well 13, did not  
19 need to be a part of the continued sampling.

20 CUTLER: Right.

21 BISHOP: Let's take a quick look.

22 LOWE: I thought you guys had some data you were  
23 going to show us.

24 BURIL: Yes, we do. In fact, I'm ready to show  
25 that to you now if you'd like to be able to see

1 that.

2 ROBLES: Why don't we do that.

3 BURIL: Jon, if you want to look that up. Judy,  
4 you did some research on that. Do you remember  
5 seeing that anywhere?

6 NAKASHIMA: I recall that being different. I  
7 thought you can use the past data to support your  
8 findings, but you couldn't use past data to  
9 eliminate chemicals.

10 CUTLER: In a sense, if we are getting all  
11 nondetects during the two RI events and we had all  
12 nondetects during the previous five years, that we  
13 could say yes, it backs it up. So in a sense, that  
14 would be supporting a negative.

15 What you're saying is correct. That's  
16 that we pretty much had planned to do, hoping to do.

17 BURIL: Let's show you what we've got here and  
18 you can kind of understand. I'm going to focus  
19 first on the SVOCs.

20 We have a handout here for you to be able  
21 to look at as well.

22 What we've done is we looked at our data  
23 validation and we tried to figure out, well, is  
24 there something that's happening through the  
25 sampling, through the lab analysis, through heaven

1 knows what other means that might be creating the  
2 concerns. I'll show you these.

3           What we did is we went back through, and  
4 for all of the organics, and you can see both semi  
5 VOAs and a VOA up there, using the example just  
6 going through, ethylbenzene, we had 44 hits in  
7 groundwater samples that were unvalidated. Of  
8 those, all of the validation work dropped those out.  
9 We found 37 hits in laboratory control samples. We  
10 even found 18 unvalidated hits in equipment blanks,  
11 and then also in field blanks.

12           In your handout, we've identified that as  
13 what we believe is a laboratory contaminant, and so  
14 that particular compound should not be a concern  
15 when we're talking about any additional work.

16           NAKASHIMA: We have a question. Were the  
17 quantities -- did you follow the quantities that  
18 were in the blanks if they're less than 10 times the  
19 amount that's in the sample?

20           BURIL: We followed the quality control  
21 assurance plan, yes.

22           CUTLER: Plus, on ethylbenzene, the volatile  
23 analyses didn't detect it. These were picked up on  
24 the semivolatile test. So the fact is it did show  
25 up on the volatile test as well. These are

1 extraneous peaks.

2 RENZI: As I say, because that's not -- it's an  
3 atypical laboratory contaminant. I mean it's one --  
4 if you had it in your lab blanks, then it's a lab  
5 contaminant. But I was surprised to see that.

6 BURIL: Di-n-butylphthalate. We had 9 hits of  
7 that detected, and 8 of those were validated. But  
8 in those, we found that we saw some in our equipment  
9 blanks as well.

10 As I recall, we actually were able to find  
11 that that, we believe, was a plasticizer that's  
12 coming from the plastic tubing we use in the  
13 sampling and also is in the plastic that may be in  
14 the laboratory and other various places where the  
15 sample comes in contact with plastic.

16 CUTLER: A possibility of this. I don't know if  
17 you want to get into details. We get Type 2 organic  
18 free water that comes in large plastic jugs. You  
19 look at the number of detects. Those are all, I  
20 think except for one, from the second sampling  
21 event. We had some water that was left over and we  
22 believe the water sat there in these jugs for like  
23 five months, that the plasticizer out of the jug  
24 ended up in the groundwater.

25 BURIL: Ended up in the groundwater as a result

1 of getting it mixed in with sampling equipment and  
2 things that were rinsed with that.

3 CUTLER: Right. Right.

4 LOWE: Isn't it possible as you're going through  
5 this to point out to us which of these detections  
6 exceeded any screening levels?

7 BURIL: You mean MCL, or you mean risk  
8 assessment?

9 LOWE: Yes.

10 BURIL: None of them exceeded MCLs. For any of  
11 them that have MCLs established, none of them  
12 exceeded it.

13 2,4-Bis(1,1-dimethylethyl)phenol. We had  
14 one hit. One was validated, but we also found 35  
15 hits in our equipment blanks. Again, our, quote,  
16 organic free water didn't appear to be very organic  
17 free.

18 CUTLER: That was detected in the water we use  
19 to make our equipment blanks, our final rinse water.

20 BURIL: So again, a plasticizer.

21 Di-(2-ethylhexyl)phthalate. Same kind of  
22 thing again. We found it three times in groundwater  
23 samples. But, again, it's a plasticizer that we  
24 found in our equipment blanks. It appears to have  
25 been introduced during the sampling process.

1           The next one, we had one sample that was  
2 detected with one hit each of these things, the  
3 benzo(a)anthracene, the benzo(a)pyrene, and so  
4 forth. A replicate sample and a subsequent sample  
5 couldn't verify this.

6           Mark, can you elaborate a little bit more  
7 on that?

8           CUTLER: We went back and checked with the lab.  
9 The lab technician noticed a pinkish color in this  
10 extraction and made a comment it was probably a  
11 laboratory-contaminated extraction. So they  
12 reextracted that sample but only analyzed the  
13 extraction for the acid fraction and not the BNAs.  
14 We don't know why they did that. The lab doesn't  
15 know why because that analyst is no longer there.  
16 But they did not reanalyze for these PAHs.

17          BURIL: Now, in spite of the fact --

18          CUTLER: They did note a problem with this  
19 sample.

20          BURIL: They noted a problem with that specific  
21 sample. In spite of the fact we did show it in our  
22 validation, at least two subsequent samples did not  
23 show any detects in these compounds. Is that  
24 correct?

25          CUTLER: We were fortunate. This is one of the

1 samples we had collected a duplicate from.

2 BURIL: Right. So a duplicate sample at the  
3 same time showed nothing. And a subsequent sample  
4 in that same location showed nothing.

5 CUTLER: Right. During the second sampling  
6 event several months later.

7 LOWE: I thought I heard someone say two  
8 subsequent sampling events.

9 BURIL: No. Two subsequent samples.

10 LOWE: So the replicate and the subsequent.

11 BURIL: Were clean.

12 CUTLER: And then, of course, historical data  
13 uncovered detected PAHs.

14 BURIL: So for these compounds, we believe they  
15 become a non-issue on the basis of the quality  
16 control and validation process that we've gone  
17 through.

18 Now, that was Operable Unit 1 wells. Let  
19 me clarify what that one was.

20 In Operable Unit 3, we had a few hits as  
21 well. But again, in ethylbenzene, we had it  
22 detected 19 times in the lab control samples, even  
23 though we found it 21 times in our groundwater  
24 samples. It was also found 19 times in our  
25 equipment blanks. So it appears that that

1 particular compound again, ethylbenzene, was as a  
2 result of some form of sample or laboratory  
3 contamination as opposed to actually being present  
4 in the groundwater.

5           Similar situations happened with the last  
6 three compounds that are on there. We found some in  
7 our equipment blank on the second compound, in the  
8 equipment blank and lab control samples on the third  
9 compound, and then a one-time hit in the groundwater  
10 sample.

11           Mark, I don't know. Has this one been  
12 validated, 4,4-butyldienebis-2, the last one?

13           CUTLER: No OU-3 results have been validated.

14           BURIL: That's right. We're still working on  
15 that. There's no validation of those per se yet,  
16 but it gives us strong indication that there is a  
17 contamination.

18           ROBLES: Question from Debbie.

19           LOWE: Why has the OU-3 data not yet been  
20 validated? I mean, this was taken July 1995. That  
21 was a year ago.

22           NOVELLY: We had some problems with the data  
23 validator getting paid through a really bad system.  
24 They had one thing on the P.O. that we wrote for  
25 them where the number of items that they validated

1 didn't exactly match for one analysis. And instead  
2 of the person who is supposed to pay the bills  
3 coming back to us and saying there's a problem here,  
4 when we called and said how come they haven't been  
5 paid yet, they kept saying, "Well, the check is in  
6 the mail." Well, the check was in the mail for  
7 about six, seven months.

8           We finally found out that when we found  
9 the problem, somebody just stuck it in a stack on  
10 their desk. They've been cut back personnelwise,  
11 and it sat there. So we've gotten that all  
12 straightened out. The validator has been paid. We  
13 can send more data. It was a stupid reason.

14           BURIL: It was an exceptionally stupid  
15 situation, and one which we didn't really understand  
16 until such time as the contractor basically said  
17 "We're not going to work anymore until you pay us."

18           LOWE: I know in the office data you had a lot  
19 of tentatively identified compounds and you just  
20 dropped those off of this chart?

21           BURIL: The only thing that we dropped off the  
22 chart was anything that said "unknown," anything  
23 that said a spike. If it says unknown, we have no  
24 way of knowing what that is.

25           LOWE: I remember looking at the data and seeing

1 caffeine as a tentatively identified compound. It  
2 seems like you dropped those kinds of things off  
3 here.

4 CUTLER: Caffeine was only detected in equipment  
5 blanks for OU-3. This was a list of everything that  
6 was detected in the groundwater sample only, and  
7 then where it was detected elsewhere. So there were  
8 a lot of unknowns that were only detected in  
9 equipment blanks or even laboratory control samples.

10 BURIL: We just tried to pare the data down for  
11 you that applied to the samples.

12 RENZI: So the data tables we had where it had  
13 the parenthetical B didn't mean it was also detected  
14 in the equipment blank; it means it was detected  
15 only in the equipment blank?

16 CUTLER: No. The little Bs mean it was detected  
17 in the laboratory blank.

18 RENZI: As well as the groundwater sample?

19 CUTLER: No. Just in the laboratory blank that  
20 was with the batch that that sample is analyzed --

21 RENZI: So these data here that are showing the  
22 SVOC results, they have a parenthetical B, meant it  
23 was just a laboratory blank? It wasn't in the  
24 groundwater sample?

25 BURIL: Yes. They're reporting what they found.

1 CUTLER: It could be, or it could have been an  
2 equipment blank. But what the B means, it was a  
3 laboratory contaminant. It was also found in the  
4 laboratory control sample.

5 RENZI: Also. It was found in the groundwater  
6 sample.

7 CUTLER: Right.

8 RENZI: And it was also found in the laboratory  
9 blank.

10 BURIL: Yes. You've got it.

11 RENZI: But that goes back to your question.  
12 Caffeine is a pretty unusual laboratory contaminant.

13 BURIL: I think one of the things that we are  
14 looking at is that when we're talking about looking  
15 at unknown scans, we did this with the GCMS method.

16 We really don't have any way of knowing  
17 what we're dealing with. If they can't tell us  
18 through a GCMS analytical method what that material  
19 is, there's really no way for us to address that.  
20 You could be dealing with broken fragments of human  
21 afoolic acids. You could be dealing with God knows  
22 what. But we have absolutely no way of knowing  
23 exactly what that is and have no way of attaching  
24 any substantial concern with it.

25 RENZI: It did look like it may have been a

1 laboratory-related thing or an analytical -- the  
2 concentrations seemed to be --

3 BURIL: For that one, yes.

4 RENZI: They tended to be in similar  
5 concentrations. So I was wondering if you  
6 identified what that was.

7 BURIL: No. We can't identify it because, like  
8 I say, the lab can't identify it for us. We'd have  
9 to rely on them to tell us. They're just fragments  
10 that appear to be coming out of the GCMS run. They  
11 have no way of attaching a name to them with their  
12 library.

13 What I've done here is I've put one up  
14 here on metals. What we're trying to show here is  
15 what we are seeing in terms of metals concentrations  
16 and what we believe to be reasonable concerns.

17 You start looking at the number of times  
18 that we detected it in groundwater in the first  
19 column and the various things, and then we compared  
20 that to the number of times we detected it above  
21 MCLs. The only compound that we had that was  
22 detected above that criteria was chromium.  
23 Virtually everything else was below. We put the  
24 maximum concentration in the third column, and then  
25 the MCLs for both Federal and State in the last two

1 columns.

2 Now, you can see pretty readily the only  
3 thing that appears to pose any concern from an MCL  
4 standpoint is chromium.

5 RENZI: May I ask a question?

6 BURIL: Certainly.

7 RENZI: This is for eliminating chemicals from  
8 your monitoring program. I'm wondering why I'm not  
9 seeing background -- comparison with background  
10 because that's usually a reason -- a valid reason  
11 for eliminating a chemical from monitoring.

12 NAKASHIMA: They don't have any --

13 BURIL: For background and groundwater we don't  
14 have any analyses for that. That was for OU-1.

15 For OU-3 we have a similar table.

16 One thing I'm going to point out. I  
17 almost ran right over it. I'm going to put the OU-1  
18 table back on the screen for a second.

19 There was concern expressed at one point  
20 about aluminum. I'm going to just point this out  
21 because I think it was significant.

22 When you look at the number of times  
23 aluminum is detected in the groundwater sample  
24 that's unfiltered, out of 75 times of sampling we  
25 found it ten times. The dissolved metals, we only

1 found it once. That's a strong indication that  
2 somehow turbidity in some way, shape or form may be  
3 playing a role, or some type of particulate that is  
4 in the water is where the aluminum is coming from.  
5 If we filter the water, and we filter it with a  
6 .45-micron filter. Is that right, Mark?

7 CUTLER: Yes.

8 BURIL: We appeared to almost completely  
9 eliminate the aluminum as a result.

10 RENZI: It would be colloidal, wouldn't it?

11 BURIL: At that level it certainly would be  
12 colloidal. But to be colloidal it would have to be  
13 some form of a complex or particulate. It can't be  
14 dissolved.

15 LOWE: Can you explain what your Footnote Number  
16 2 means, "Treatment technique and public  
17 notification triggered."

18 BURIL: That's a regulatory thing.

19 CUTLER: Right off of the regulatory MCL list.

20 LOWE: Okay.

21 BURIL: I guess that it's a requirement that the  
22 public be notified when water has more than that  
23 particular amount of that particular constituent  
24 present. That's the way I understand it. I'm not  
25 entirely clear about that. Maybe Penny or someone

1 from DTSC might have a better idea on how that  
2 works. Fortunately, I've never had to do that so  
3 I'm not really sure.

4 Now I'll put up OU-3 again.

5 NAKASHIMA: Chuck, I know I have this graph set  
6 of data here. Do you have one that specifically  
7 states which samples were filtered and which were  
8 unfiltered?

9 BURIL: It should be stated on there.

10 CUTLER: Is that for organics?

11 NAKASHIMA: For metal. For the inorganics.

12 BURIL: You should have a final table as well  
13 that identifies that.

14 NAKASHIMA: Okay.

15 CUTLER: It should be on there.

16 LOWE: We're never going to have final-final  
17 data until it's been validated. Right?

18 BURIL: The OU-1 data has been validated.

19 LOWE: I thought we were looking at OU-3.

20 BURIL: I'm not sure which one Penny is looking  
21 at.

22 NAKASHIMA: It was sent with the baseline human  
23 health risk assessment outline.

24 BURIL: That is OU-3 data.

25 RENZI: It goes until November '94.

1 BURIL: Which one is that? Let me see that,  
2 Penny.

3 NAKASHIMA: There's the cover letter.

4 BURIL: This is for OU-3. Yes. This is for the  
5 organics on this table. Are the inorganics on here  
6 as well?

7 NAKASHIMA: There's also the inorganics.

8 BURIL: The inorganics are back here as well.

9 If you look, it has footnotes here.

10 NAKASHIMA: It's in the footnote.

11 BURIL: It's in the footnotes and it identifies  
12 it.

13 CUTLER: In subsequent tables it actually has a  
14 column.

15 NAKASHIMA: Right. I saw that.

16 BURIL: We have a separate column on other  
17 tables because it makes it easier to read.

18 On OU-3, then, looking at metals and  
19 looking at the same kind of thing that we did for  
20 OU-1, we find that we detected various metals a  
21 number of times.

22 You can see we detected any number of  
23 metals any number of times. The only thing that we  
24 saw on OU-3 that ever exceeded MCL was aluminum.  
25 That was kind of a surprise to us until we looked at

1 the filtered samples and trying to determine whether  
2 the material was actually dissolved or not. In the  
3 filtered samples it dropped out completely. We  
4 never did exceed MCL.

5 Again, the maximum concentration is  
6 provided there in the third column, and then the  
7 State and Federal regulatory limits in the last two  
8 columns.

9 Then lastly, we have just a one-shot deal  
10 in OU-2 in the soil samples. B.G., remind me if I  
11 misspeak, please.

12 Of 81 soil samples that we took during the  
13 course of the OU-2 work completed to date, we only  
14 detected one semi VOA compound. And we detected  
15 that three times in three samples, but it's the  
16 plasticizer that we've seen in the groundwater. So  
17 we believe that to be a laboratory contaminant  
18 introduced during the course of laboratory analysis.

19 Now, the point that we're trying to make  
20 with all this is simply, in terms of VOCs in the  
21 groundwater and in the soil, that the data we have  
22 appears to show we simply don't have a problem.

23 NAKASHIMA: SVOCs.

24 BURIL: Excuse me. SVOCs. I'm sorry. The  
25 SVOCs simply show we don't have a problem. Every

1 one of them has dropped out in one fashion or  
2 another.

3 On the metals, we're in a position of  
4 saying in the groundwater that all of them have  
5 dropped out in terms of concerns with MCLs, with the  
6 exception of chromium, which we maintained  
7 throughout our sampling protocol.

8 ROBLES: And that rests your case.

9 BURIL: That rests my case from a technical  
10 standpoint, yes.

11 Does anyone want me to put these back up?

12 NIOU: Everything is here.

13 CUTLER: Basically, these tables are boiled down  
14 to this.

15 BURIL: There's one column added to the handout  
16 that you have, and that is what we think is the  
17 source of the material that's identified there.

18 ROBLES: Can we open it up for discussion? What  
19 do you think? What do you guys think?

20 AMIR: Just one second.

21 ROBLES: Okay.

22 RENZI: These are just kind of thoughts that  
23 came to me while I was looking at these, also while  
24 I reviewed the data initially.

25 I would agree that on some of these SVOCs,

1 mainly do the real infrequent detection and then  
2 also co-contamination of your laboratory blanks. I  
3 think you can drop them out, in particular the  
4 plasticizers.

5           Often we see those run through the risk  
6 assessments anyway, and they usually pose no  
7 significant risk. For instance, on the very first  
8 one, on OU-1, the (2-ethylhexyl)phthalate is the one  
9 phthalate that's a carcinogen. Out of 77 samples  
10 you picked it up three times and you picked it up  
11 once in a lab blank.

12           That would be something that I often see  
13 included in the risk assessment, but it's discussed  
14 in the uncertainty section. It's sort of understood  
15 that we've shown there's minimal risk. It's really  
16 a judgment call on whether or not something like  
17 that would be included or not.

18           CUTLER: To be honest with you, that was the  
19 intent, to be able to use this data for that.

20           RENZI: If you were to append this table with  
21 these justifications, that would be -- you know,  
22 that kind of discussion is what is usually presented  
23 with the uncertainty discussion, but it can be  
24 appended. If you don't want to run the quantitative  
25 part of the evaluation, you just say refer to this

1 discussion.

2 BURIL: Are you saying to amend that to our  
3 ultimate risk assessment as it's presented in our  
4 final report?

5 RENZI: Or incorporate it in your discussion, in  
6 the text of your risk assessment.

7 BURIL: Of the final report.

8 RENZI: Yes. These are very nice tables. You  
9 could refer to those in an appendix. It's nice to  
10 have the numbers presented.

11 BURIL: Okay.

12 RENZI: The sample with the PAHs concerned me a  
13 little bit because of the proximity to the one  
14 disposal area. I would suggest, this is a  
15 suggestion only, I don't know what Penny would say,  
16 because you couldn't eliminate it due to other  
17 contamination, I would suggest that you sample for  
18 it one more round. You have one showing no PAHs. I  
19 would like to see one more quarter.

20 BURIL: Let me be sure you understood, because  
21 we took two samples at one sampling event. One of  
22 those samples showed the hits. The other one taken  
23 at the same time didn't. Then we took another  
24 subsequent sample at a temporally displaced sampling  
25 round and found nothing.

1           So we have both of those, I think, already  
2 covered in that situation.

3           RENZI: I would just say go for yet another --  
4 just one more, third time point. A lot of it is my  
5 ignorance about the groundwater and what's going on  
6 in terms of back and forth or up and down. Like I  
7 say, it's just a suggestion. I leave it up to the  
8 project managers to decide. Just because it  
9 couldn't be ruled out and because of the co-location  
10 with that disposal pit. Those are my two main  
11 reasons for the concern, and because they are  
12 carcinogens.

13           The other main concern I have is the  
14 treatment of the metals. For risk assessment  
15 purposes, we don't use -- we don't accept criteria  
16 like MCLs or PRGs, or whatever, for eliminating  
17 chemicals. If you've detected a metal or an  
18 inorganic in groundwater and you can show that it's  
19 below background levels, then we say, okay, you  
20 don't have to include it in the quantitative risk  
21 assessment.

22           In this case if you don't have background  
23 groundwater data to compare it with, I'd recommend  
24 that you include them in the risk assessment. Most  
25 of these will probably present a low hazard at those

1 concentrations. But without background data, you  
2 can't eliminate them.

3 BURIL: Let me ask a question, then. When we  
4 say 'background," what would you consider  
5 "background"?

6 I'll tell you what my interpretation of  
7 that would be, and that would be a well that would  
8 be typically upgradient and removed from the area of  
9 contamination as we've defined it thus far, and that  
10 has generally shown a nondetect for the constituents  
11 that we've been concerned with thus far in terms of  
12 VOCs.

13 RENZI: It may be detectable. It may not be.  
14 It depends on what the --

15 BURIL: That's what I'm saying. I'm focusing on  
16 VOCs because that's really what I view as the plume,  
17 if you will. If we find something in that plume of  
18 VOCs and it's above whatever level, then it would be  
19 a concern. But if it's outside that area that we're  
20 thinking of is defined currently as the plume and  
21 our historical data is showing that we aren't  
22 normally seeing anything in that particular well, I  
23 could, I think, reasonably say that is a background  
24 well.

25 BISHOP: Let me try and clarify here for a

1 second.

2 RENZI: As I say, I was referring to inorganics.

3 BURIL: I know.

4 RENZI: Are you saying using --

5 BURIL: What I'm trying to do is I'm trying to  
6 limit the discussion of which well is which.

7 Unfortunately I didn't bring a map.

8 BISHOP: I think what you're trying to say is if  
9 we use VOC as the indicator for what's contaminated  
10 and what isn't, if you have a well that is generally  
11 upgradient from the areas of VOC contamination, then  
12 can that be used as a background well.

13 BURIL: You've hit it exactly.

14 BISHOP: As I remember from looking at the  
15 maps, we have the well that's right up at the top of  
16 the --

17 BURIL: MW-6 and MW-14 come to mind.

18 BISHOP: Actually, MW-1 was what was coming to  
19 mind.

20 RANDOLPH: MW-1.

21 BURIL: Or MW-1. Okay. That could work as  
22 well.

23 BISHOP: MW-1, essentially upgradient from  
24 everywhere. As I remember from a past discussion,  
25 there's no groundwater reversal in that area, so

1 that's always upgradient, whereas MW-6 is  
2 questionable because of possible reversals. Right?

3 ROBLES: Right.

4 BURIL: Possible, yes. That's a good point.

5 BISHOP: Has MW-1 ever had any VOC contamination  
6 in it?

7 BURIL: Never.

8 MELCHIOR: No.

9 BISHOP: So that might be a useful well to look  
10 as background, and then you compare your metals that  
11 you found in there to your other ones as  
12 your --

13 MELCHIOR: Chuck, the concern with that is that  
14 the placement of MW-1 is right at the mouth of that  
15 subcanyon. And for the most part, it's probably  
16 different water chemistry than you see in the rest  
17 of the basin. So in a sense it may be background  
18 for water that is associated subflow out of that  
19 subcanyon.

20 BISHOP: I have a little trouble with that  
21 because when I look at your groundwater contour maps  
22 it shows it as upgradient from the other parts of  
23 the site.

24 ROBLES: I think we're going to have to discuss  
25 this.

1 MELCHIOR: For a very short period of time.

2 BURIL: Let's do this. Let us take back your  
3 thought, Jon. And also, I think if we looked at the  
4 other wells which we historically thought were  
5 upgradient, and just let us compare the  
6 concentrations that we're talking about, see if what  
7 we're seeing makes sense in light of your  
8 discussion, Jon, in light of what we think is  
9 conceptual as well, and see what it tells us. I'm  
10 not sure that more than that is reasonable at this  
11 point.

12 LOWE: I have another suggestion in terms of  
13 looking at this data. I think we have one risk  
14 assessor in the room. The rest of us tend to see it  
15 somewhat as a mystery.

16 As long as the first step of the risk  
17 assessment is to take all of this metal and SVOC  
18 data and put it through the Region 9 PRG and PEA  
19 screen, we might as well do that now and see what it  
20 comes up with rather than us sitting around saying,  
21 oh, well, it doesn't look like it's a concern based  
22 on these comparisons.

23 BURIL: What I'm hearing from Barbara, though,  
24 and let me be sure I'm understanding correctly, is  
25 that if you detect anything in the groundwater, it

1 becomes reason for a quantitative concern unless you  
2 have a comparison to background samples with which  
3 you can then drop it out by comparison.

4 RENZI: For inorganics.

5 BURIL: For inorganics. Correct.

6 So we either have to have a background  
7 analysis to compare to the wells that aren't  
8 background, or we have to assume that they're all a  
9 concern and run it through the quantitative risk  
10 assessment. Is that what you're saying?

11 So while I think your idea is reasonable,  
12 I'm not sure just that level of effort would be  
13 enough based on what Barbara is saying.

14 ROBLES: Can we do something, Debbie? Can we  
15 break? I need to huddle with my people.

16 BISHOP: Yes.

17 ROBLES: I do need to huddle to discuss this.

18 BURIL: And lunch is here.

19 BISHOP: Before we get off of the background  
20 well.

21 BURIL: Sure.

22 BISHOP: I don't want to sound paranoid, but the  
23 idea of taking and comparing your samples for each  
24 of the wells you think might be background to the  
25 downgradient and determining which one seems to be

1 the best does not seem to be the best approach.  
2 Maybe determining which one would be background by  
3 flow, not by comparing the metals contaminant  
4 levels.

5 BURIL: No. That wasn't my point. I'd like to  
6 just know what each well is telling us. If they're  
7 all showing low and the wells of concern are still  
8 showing low, I mean, they're all comparable, then I  
9 think it becomes a moot issue.

10 ROBLES: Is there any other question so that we  
11 can discuss it during our huddle time? Any other  
12 questions that we need to bring up?

13 CUTLER: What levels above background do things  
14 start getting a concern that you look at?

15 RENZI: I was going to say, if you're only going  
16 to have one background well, then you're just  
17 comparing against the data from that one well. If  
18 you want to start talking about multiple wells, as  
19 Jon was saying, that's going to get into a different  
20 issue. There are different statistical methods you  
21 can use for comparing. But I think that's another  
22 subject. But I'm just throwing that out.

23 That is -- from a risk assessor's  
24 perspective, background is a reason for eliminating  
25 inorganics from inclusion in risk assessment.

1 BURIL: Are you saying a statistical  
2 distribution of background concentrations to know  
3 whether or not the wells that we have potential  
4 concern with are indeed background or not?

5 RENZI: I don't know if they're contaminated.

6 CUTLER: No. Whether it's right above  
7 background. There's going to be, usually, some  
8 range. I think we said in the workplan 5 times  
9 background.

10 BURIL: I'm just trying to understand.

11 BISHOP: What they used in landfills for  
12 inorganics was a Student T test. You compare the  
13 statistics from that against the background and the  
14 downgradient.

15 RENZI: Assuming you have more than one well. I  
16 mean, if you just have one background well, then  
17 your statistics get kind of funny because you're  
18 only talking about one --

19 BURIL: No. If we only have one well but we  
20 have long-term data for that well.

21 RENZI: We could talk about that later. That's  
22 a statistical concern.

23 BURIL: Okay. I just wanted to be sure --

24 LOWE: Is it really that much work in the risk  
25 assessment to carry all of your detections from

1 SVOCs and metals through your quantitative analysis?

2 ROBLES: For me, I've got to discuss that with  
3 my people. There's things in my mind from my  
4 personal experience of working at other Superfund  
5 sites that bother me right now. I really want to  
6 huddle with my folks.

7 BISHOP: Okay.

8 BURIL: Okay.

9 (At 12:49 p.m. a recess was taken  
10 until 1:49 p.m. of the same day.)

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1 AFTERNOON SESSION

2 1:49 P.M.

3  
4 LOWE: I think we should get started.

5 The first thing I wanted to deal with is  
6 logistical issues. It seems like we probably have a  
7 lot more to cover, and our original time constraint  
8 was about 3:00 o'clock so Barbara could leave. So  
9 my question to DTSC is if there's another way we  
10 could get Barbara to the airport and if Penny would  
11 be willing to stay a little longer than 3:00 so we  
12 could get to these other issues. I was thinking we  
13 could call like an airport shuttle or a taxi.

14 RENZI: I'm sorry. I was reading on the way  
15 down so I wasn't paying attention to how far it was.

16 LOWE: I'm just worried that it's almost 2:00  
17 o'clock. To get you to the airport by 4:00 you  
18 would have to leave at --

19 BURIL: You would have to leave now.

20 RENZI: This is to Burbank.

21 BURIL: Is it Burbank? Not LAX?

22 RENZI: Burbank.

23 BURIL: That's a little easier.

24 RENZI: My flight is at 5:00, but it's with  
25 Southwest. As I said, I checked in about 35 minutes

1 before departure in Sacramento and I got ticket  
2 number 98. So they're filling up their seats very  
3 quickly.

4 BURIL: Friday nights are bad. Traffic would be  
5 bad, too, at this time of day.

6 RENZI: Whatever I need to do to be there at  
7 4:00.

8 AMIR: I have to go to the airport, too. I'm  
9 flying to Berkeley. So I can take you to the  
10 airport and, Penny, if you want - if you don't want,  
11 you know, we can have another meeting - but if you  
12 want, you can stay to 4:00.

13 NAKASHIMA: I can stay. You're going to be  
14 going out there.

15 RENZI: What time are you leaving from Burbank?

16 AMIR: My flight is at 6:30. I can take you  
17 there and go back to the office.

18 RENZI: Okay.

19 LOWE: Or if you want to stay a little bit  
20 longer, we could call a shuttle or a taxi, or Chuck  
21 also offered to be a ride. So I mean, it's up to  
22 you guys how you want to handle this. It would be  
23 nice to go past 3:00, definitely.

24 AMIR: How much more time do we need?

25 BURIL: That might depend on what you think of

1 some of the things we'll be presenting to you here  
2 in just a second.

3       LOWE: Shall we go through your proposal?

4       BURIL: Why don't we. Yes.

5       NAKASHIMA: Can we make a determination at 3:00  
6 o'clock, after you've presented the information to  
7 us?

8       BURIL: Sure, we can handle that.

9               Here is what we have down. This is our  
10 understanding of what has transpired today in terms  
11 of the SVOCs in groundwater. I want to be sure that  
12 we keep that distinct.

13               There is still a concern expressed by DTSC  
14 that the sample that had those hits, the pink one  
15 that we described, may still be a problem.

16               Now, we went back. We identified that.  
17 That is Well MW-12 at screen 2. What we're saying  
18 is that we will go ahead and we will sample that one  
19 time for the PAHs to verify that those previous two  
20 samples were actually nondetects and there is no  
21 further problem.

22               But the understanding is that all of the  
23 other PAHs and SVOCs are accepted as having dropped  
24 out on the basis of the quality control data that we  
25 provided to you today and that no further analyses

1 for any other wells would be needed.

2       LOWE: Chuck, I would suggest that we define  
3 "drop out" on this flip chart.

4       RENZI: Were PAHs detected in any other wells at  
5 any other time, ever?

6       CUTLER: No.

7       RENZI: What were the detection limits generally  
8 or on the follow-up sample?

9       BURIL: Whatever the requirements are under the  
10 SW 486.

11       RENZI: Part per billion to part per billion  
12 level?

13       CUTLER: They were low. Yes.

14       BURIL: Barbara, it's whatever is required under  
15 SW 846 as a minimum.

16       RENZI: SW 846 doesn't require detection limits.  
17 I'm thinking about human health risk levels for  
18 drinking water.

19       NAKASHIMA: I have the workplans in the truck.  
20 I have to run out and get it.

21                I would say DTSC would not commit to  
22 eliminating those right today at this time, but what  
23 we would want to do is, we'd want to take a look at  
24 your data packages and just as -- because normally  
25 what we do when we're -- we want to screen out and

1 take a look at what all your -- the ones that are  
2 lab contaminants. So I wouldn't want to commit to  
3 say, well, you know, yes, we're going to eliminate  
4 those today.

5 CUTLER: Would it help that these have already  
6 been validated? They came through validation.

7 BURIL: What we're basing this on is validated  
8 data.

9 CUTLER: If you want to look at them again,  
10 that's okay.

11 BURIL: I don't know.

12 CUTLER: It's up to --

13 ROBLES: I have a concern, because that's what  
14 our understanding was, that if we don't find any  
15 more hits on this, that it would not be an issue,  
16 because it came up once. It's never come up before.  
17 It didn't come after the two hits, one on the same  
18 time that we took the sample, another one later.  
19 And we're doing a third, as you asked, because you  
20 requested that. And so that's what we're asking, if  
21 we're --

22 RENZI: I was only suggesting it. If you don't  
23 think it's necessary. I don't have a problem with  
24 it as long as the detection limits are sufficient --

25 CUTLER: I don't know if you're aware. We got

1 down to 10. There's an 11 here. There's a 12 here.  
2 So these are detects. So detection had to be below  
3 that.

4 RENZI: Below that. Yeah. I don't have a  
5 problem with that.

6 As I said, the criteria were you couldn't  
7 eliminate it due to lab contamination and the fact  
8 that it's next to an area that was reporting a  
9 discharge of oily waste.

10 BURIL: We recognize that as a concern. That's  
11 why we said for that site that we identify it as  
12 having that potential cross-contamination, we would  
13 go ahead and analyze it again.

14 But I haven't heard any other discussion  
15 that indicates that there a concern with SVOCs. In  
16 fact, our quality control data shows that there is  
17 no concern based on the lab contamination, sample  
18 contamination issues, and past data shows no hits.

19 NAKASHIMA: I just want to take a look at that,  
20 your lab contaminants, what levels you have.

21 CUTLER: For this particular sample?

22 NAKASHIMA: No, for the ones where you have the  
23 lab contaminants.

24 BURIL: Penny, how long are you going to take to  
25 make that analysis?

1           Here is my concern. Let me explain why I  
2 ask the question in quite so point blank a fashion.

3           We're going to be out there sampling next  
4 week or the week after. There's a question mark as  
5 to when we actually would be required to start  
6 taking these analyses out if we were to continue  
7 them.

8           The way that your initial draft letter  
9 said is that you expected it to be incorporated in  
10 the monitoring program, which starts this month,  
11 which is a major concern for us because we simply  
12 don't have the wherewithal to do that, contractually  
13 and other ways.

14           If you're looking at postponing it for a  
15 period of time --

16           NAKASHIMA: No, no.

17           BURIL: -- until this is done, that's something  
18 else.

19           NAKASHIMA: I think Debbie already made it clear  
20 that you go ahead and sample, but don't wait on  
21 these issues for this next sampling round that  
22 you're going to start up in a couple weeks.

23           BURIL: I want to be sure that we're clear on  
24 each aspect, tributyl tin, SVOCs, each one of these,  
25 that we don't have any misconceptions of what's

1 going on.

2 NAKASHIMA: I have no problem. Just go ahead  
3 and start your sampling and then these issues, you  
4 know, get -- we'll take a look at the data packages  
5 and then make our decision, like we will for the  
6 tributyl tin, before the next sampling round.

7 LOWE: I think what DTSC is saying is if you've  
8 done your data packages right, then this agreement  
9 is fine. But if they find something in your data  
10 package that looks funny, then it kind of reopens  
11 the issue.

12 BURIL: I have no problem with you reviewing the  
13 package. Don't take me wrong. I think that's a  
14 very reasonable thing to request.

15 I just want to know at what point in time  
16 we need to make the decision as to whether we are or  
17 are not going to continue this, and how long we are  
18 going to take to reach that decision.

19 AMIR: Before the next round of sampling.

20 BURIL: Okay.

21 AMIR: So you go ahead with your sampling the  
22 way you wanted to do it, and before the next  
23 sampling we'll make a decision.

24 BURIL: Sounds fine.

25 CUTLER: So we're talking about the level 4 data

1 packages for semi-volatiles, we'll make a copy and  
2 send it?

3 BURIL: Yes. That's what we're talking about.  
4 Send it over to them so they have it.

5 RENZI: I have a question on that. Do those  
6 data packages address those unknowns, those spikes  
7 in the SVOCs scans? Will there be any description  
8 of those?

9 CUTLER: I haven't looked at them carefully. It  
10 has everything.

11 BURIL: It has everything that's identified in  
12 the QUAP.

13 RENZI: My question is will there be further  
14 attempts by the lab to identify those unknowns?

15 BURIL: No. There are no further efforts to  
16 identify them.

17 RENZI: So we don't know what those spikes are.

18 BURIL: We have absolutely no idea. And based  
19 on the way the GCMS analysis is run, I don't think  
20 the laboratory will have any way of identifying them  
21 either.

22 CUTLER: They don't match any type of library.

23 RENZI: Has it gone just beyond just the GCMS  
24 scan, the normal GCMS screening?

25 CUTLER: Yes. All these unknowns have come up

1 on the --

2 RENZI: 8270?

3 CUTLER: -- 8270, and they also ran some 525.1s.  
4 They came up on the 10 unidentifiable peaks. That's  
5 where all these unknowns were shown. And the  
6 ethylbenzene showed up there. Everything that has a  
7 little "EP" next to it is an extraneous peak.  
8 That's not on the 8270 list of analytes.

9 RENZI: That's my concern. Because I don't know  
10 what JPL used or what they discharged. We had  
11 these -- they're pretty substantial concentrations  
12 and they haven't been eliminated through a normal  
13 data validation. I'm just wondering if the I.D. of  
14 those chemicals is going to be pursued. In other  
15 words, are we just going to ignore analytical peaks  
16 that are showing up in these GCMS scans?

17 BURIL: Let me qualify one thing that Mark said  
18 and let me be sure I'm under the right impression.

19 Where there is an unknown peak or where --  
20 let's not even call it an unknown. Let's call it an  
21 extraneous peak. If it's within the laboratory's  
22 library of GCMS information and it's capable of  
23 pulling out what that peak would be as a result of  
24 addressing that library, they have done that.

25 CUTLER: Yes.

1 BURIL: That's where we get the things like the  
2 carbon disulfide that you saw there that dropped out  
3 through validation. Those extraneous peaks were  
4 identified even though they aren't part of that  
5 particular scan.

6 So where it says "unknown," it is truly  
7 something that they simply can't identify and that  
8 they have actually gone through their library to try  
9 and identify that.

10 Is that correct, Mark?

11 CUTLER: Yes.

12 BURIL: So there's no way of knowing what it is.

13 CUTLER: There is a fair amount of unknowns.  
14 The labs are basically saying you're chasing your  
15 tail to try to find what these things are. Mass  
16 spec can't identify it. What else can you do, type  
17 of thing.

18 LOWE: When you say they've gone through the  
19 library, is that like a computer comparison?

20 BURIL: Yes, it is.

21 LOWE: Or is that also somebody following up --

22 BURIL: It's a computer comparison of the GCMS  
23 spectra to what the peaks are. They've got spectra  
24 for I don't know how many thousands of chemicals.

25 RANDOLPH: It's all out of the EPA library.

1 MELCHIOR: Tens of thousands.

2 BURIL: If they can't identify it using that  
3 library, there is no method that we are going to be  
4 able to employ because they've done everything  
5 that's technically possible.

6 CUTLER: They say it's either some natural  
7 organic material that we're picking up or artifacts  
8 of extraction. Some of these long, huge compounds,  
9 they may break down in extraction.

10 MELCHIOR: Which are often just natural organic  
11 within the groundwater system itself.

12 CUTLER: Some chain is broken and now who knows  
13 what it is. It's just a piece of an organic  
14 compound.

15 BURIL: I think if we weren't running level 4  
16 data we wouldn't even see these reported. But  
17 because the peaks do show up, they report them  
18 because it's a requirement of the level 4 protocol.

19 CUTLER: They say after the normal analytical  
20 list, the next ten things you see in there, no  
21 matter what they are, let us know. And that's  
22 what's showing up.

23 LOWE: Okay.

24 AMIR: We have a misunderstanding. Did you say  
25 that you just compared it in a computer program, or

1 did somebody actually compare it to the other charts  
2 too?

3 BURIL: I'm not sure I understand the question.

4 ROBLES: She's asking is it done by computer or  
5 by hand.

6 BURIL: It's generally done by computer because  
7 they do go through literally thousands of spectra to  
8 be able to understand what the material is. To do  
9 that by hand would be an incredibly cumbersome  
10 process. That's why they use a computer.

11 AMIR: I understand. But there are sometimes  
12 chemists look at it and compare the data and they  
13 can find out. Computer gets the information that we  
14 give it, right, in the program. But sometimes good  
15 chemists can realize what kind of spikes there are.

16 CUTLER: I think they do that. I can't be  
17 certain, but when it comes up an unknown, some of  
18 these unknowns are identified an unknown hexanedioic  
19 acid or something. The analyst can tell by where  
20 the peak is that it's that type of acid.

21 BURIL: Mark, can you pursue this by asking the  
22 laboratory to give you their unknown identification  
23 procedure?

24 CUTLER: Sure.

25 AMIR: That would be good.

1           BURIL: Then we would at least be able to  
2 resolve this without any further discussion.

3           RENZI: And if they have an idea what they are,  
4 just in terms of their professional judgment, that  
5 kind of information, because then with the data  
6 package it would help decisionmakers.

7           AMIR: Right.

8           BURIL: I guess I have to ask why you want that.  
9 If they reported it's unknown, they can't figure it  
10 out. And asking them to attach a name to it is  
11 something that I feel personally uncomfortable with,  
12 because they would have done so already.

13          RENZI: I guess, if you look at it from a  
14 different perspective, I'm uncomfortable thinking  
15 we've got groundwater that's a potential drinking  
16 water source that has unknown chemicals in it that  
17 people could be ingesting.

18          MELCHIOR: You have that every day.

19          BURIL: We have that all the time.

20          RANDOLPH: Every time you take a drink of water.

21          MELCHIOR: Natural organic materials which are  
22 breakdown products of vegetation are very common.

23          RENZI: I think those typically would turn up as  
24 ticks and they're generally identified. If that's  
25 what the laboratory -- the analyst sees it all the

1 time and they think that's what it is, we don't have  
2 background well data to show, yes, it's shootin'  
3 background wells as well, then it's one of those  
4 areas where there's a question, from my perspective.  
5 I just wanted to know -- my question was if you were  
6 going to pursue that any further or not.

7 MELCHIOR: Some of these compounds have  
8 molecular weights which are much higher than any  
9 anthropogenic that would give those concerns.

10 BURIL: I think the answer to your question,  
11 Barbara, is simply at this particular time the  
12 answer is no, we are not planning to pursue that.  
13 We do not see the need at this point because if the  
14 compound is unknown, its toxicity is going to be  
15 unknown. Its concentration is God knows what. We  
16 would be chasing something ad nauseum. We have no  
17 idea at what point we would ultimately stop.

18 LOWE: Would DTSC be interested in getting the  
19 GC mass spec and looking at them to see if your  
20 chemists have any idea what they might be? Is that  
21 a compromise?

22 RENZI: I think if your laboratory just provides  
23 a descriptive report with the data package, which  
24 I'm assuming they do anyway, like describing the  
25 pink extract, for instance, you know, the unknown

1 peaks, list the peaks, were they eluded, and if they  
2 have some idea what they might be, then to report  
3 that as well.

4           You're right. There are a lot of unknowns  
5 out there. We'll never know what they are. As  
6 Chuck said, we won't know what the toxicity is.

7           My question was: Were you planning to  
8 pursue it or not? I wasn't telling you to. I was  
9 just wondering if you were.

10          BURIL: No, no, that's fine.

11          RENZI: How far are we going to chase it before  
12 we say "Okay, we have enough." I think the  
13 laboratory can provide some qualitative information  
14 that would be helpful.

15          BURIL: We can provide you the data packages.  
16 I'll warn you that it is about this deep for each  
17 sample.

18                I guess the one thing that I'll mention a  
19 concern with - I don't believe that there is a  
20 resolution, though - is that if somehow there is a,  
21 quote, best judgment identification of a possible  
22 compound that one of these spectra might represent,  
23 I do not want to see that become the issue in a risk  
24 assessment. I don't believe that that would be  
25 professionally prudent.

1           RENZI: I guess -- I don't want to take up more  
2 time discussing this. I'm just saying that as I  
3 read these data and I read through, we've got  
4 groundwater monitoring wells with consistently  
5 unknowns showing up, information just basically in  
6 the analytical report, what the range of molecular  
7 weights were, they're unidentifiable, they didn't  
8 match with any of our libraries. Just a qualifying  
9 statement.

10           BURIL: That's fine.

11           RENZI: Wherever there's a question or a data  
12 gap it can often be filled with "We don't know, but  
13 this is what we think and this is what we do know  
14 about it," period.

15           BURIL: We'll provide you the data package.  
16 We'll see if that provides the information for you.

17           RENZI: That's for Penny to tell you, because we  
18 don't have the resources to review it.

19           BURIL: That's all we have, is the data  
20 packages.

21           LOWE: So there's two action items that came out  
22 of here. The first one is that Foster Wheeler will  
23 tell us what the laboratory procedure is for unknown  
24 compounds, identifying unknown compounds.

25                   The second one is that Foster Wheeler, I

1 guess, will get DTSC the data validation packages.  
2 I'd like to clarify exactly what you're going to be  
3 getting in them, if it's just certain samples or if  
4 it's all the SVOC data. What are you guys  
5 interested in?

6 BURIL: Again, just a note of caution. You're  
7 talking about a lot of information.

8 NAKASHIMA: Can I let you know which samples?

9 BURIL: That would be fine. We'd appreciate  
10 that.

11 NAKASHIMA: We don't want all of them.

12 BURIL: I was going to say, you'd bury yourself  
13 very quick. Judy's office is filled with this  
14 stuff.

15 LOWE: The other thing I had wanted to do  
16 earlier is better define what this "dropping out"  
17 means.

18 BURIL: "Dropping out" means, quite literally,  
19 that we have it as no longer a concern and that  
20 further analytical requirements would not be  
21 imposed.

22 LOWE: So it means we will no longer be sampling  
23 the groundwater.

24 BURIL: For that constituent. Correct.

25 LOWE: So it doesn't mean that the risk

1 assessment will not consider the SVOC data.

2 And it doesn't mean that when you --

3 BURIL: Where there's SVOC data that's been  
4 validated and does not have an explanation in the  
5 data validation process as to why it would be  
6 present in a groundwater sample, then I would say  
7 yes, it would be incorporated.

8 LOWE: Why don't I just cross out "dropping  
9 out," and we'll just say "accepted as no longer  
10 sampling of groundwater for SVOCs," because they  
11 still will be considered in risk assessment.

12 BURIL: All those that don't have the  
13 understanding of having a problem through the data  
14 validation process identified will be incorporated  
15 in the risk assessment.

16 Second page.

17 I guess we really had some questions about  
18 the metals part of this. What it came down to is, I  
19 guess, what, exactly, were you hoping to accomplish?

20 If you were hoping to start now in the  
21 July sampling, we have a concern about that. If  
22 not, when are you talking about starting this? What  
23 kind of kicking off are you talking about and how  
24 would you rationalize that?

25 We'd just like to understand better what

1 you're expecting.

2 NAKASHIMA: This is for the groundwater?

3 BURIL: This is for groundwater for metals.

4 Yes. I'm sorry I didn't write down "groundwater."

5 NAKASHIMA: I guess it would be the same as the

6 others. We wouldn't hold up the sampling round

7 since you don't have that worked into your budget.

8 But it's something that we will look at after you go

9 through the screening.

10 BURIL: Here is what we thought could be of

11 benefit to us all, and that is that we would like to

12 compare the data that we have currently to the

13 screening levels that have been discussed here today

14 and see if any of these things drop out.

15 In addition to that, we would like to

16 utilize public drinking water supply wells

17 upgradient of the site as background and take the

18 samples from that and run the analytical method for

19 metals on that sample. And I'm talking one sample

20 at one location here.

21 ROBLES: Talking about the four wells.

22 BURIL: No. There's four wells in the field,

23 but they're all within an acre area. You can take

24 four samples and combine them or do whatever. I'm

25 talking about taking that one sample and using that

1 as the background.

2           The reason I don't want to go all over the  
3 place is that even that one has a question mark as  
4 to whether or not it's in a plume that somebody else  
5 is doing. We don't know. We can take umpty-ump  
6 samples, but every time that you move around, you  
7 have a potential of being in some other kind of  
8 potential problem. I mean, we've already identified  
9 this.

10           I don't think there's a metals problem  
11 there, which is why I think that using that as a  
12 metals background is okay. Everything I've seen  
13 from the water company says that there is no metals  
14 problem. So the water is being delivered to their  
15 customers under the assumption, in analyses that  
16 they've performed, that there is no metals problem,  
17 which leads me to think that it's good enough for a  
18 background.

19           If we do that, we would take and compare  
20 the levels that we would determine from that to  
21 whatever we couldn't reasonably resolve with the  
22 screening levels, and whatever else drops out would  
23 then be considered out of the picture and what falls  
24 through in both of those scenarios would be  
25 something that we would be concerned with enough to

1 consider going on with additional sampling and  
2 evaluating that through the risk assessment.

3 ROBLES: It was kind of your concern, Debbie,  
4 that you were talking about using background as well  
5 as the risk screening to be able to look at  
6 concerns.

7 LOWE: My concern is whether we're making too  
8 big of an issue about this whole background metals  
9 in the groundwater.

10 BURIL: In all honesty, I believe we are.

11 LOWE: It seems to me what Barbara is saying is  
12 we have two options with how to proceed with the  
13 risk assessment. Either we can carry all of the  
14 metal detections through the calculations until you  
15 end up with your final risk number, or you can take  
16 some of those out based on a screening of those  
17 metals against background. Either we can sit and  
18 bicker about what is background, how you do it, what  
19 statistical da-ta, da-ta, da-ta, or we can just  
20 carry all of those detections through the  
21 calculations.

22 And what I think will happen is that  
23 you'll have your VOC risk up here at 10 to the minus  
24 5, 10 to the minus 4, and that if you sum all your  
25 metals risk, it will be down in the 10 to the minus

1 7 risk. When you add them all together, your number  
2 is pretty much still the same and you're only going  
3 to establish cleanup levels for your chemicals of  
4 concern, which, based on the screening, it looks  
5 like it would just be your VOCs.

6 CUTLER: Right. That's a very good point.

7 But I think the other issue is we can't  
8 drop metals from the monitoring program based on  
9 MCLs, is what Barbara was saying. So the other  
10 issue here is, okay, how can we drop them from  
11 monitoring? She said either compared to background  
12 or do your screening with the risks.

13 LOWE: I think what you can do to drop your  
14 metals from your groundwater monitoring program is  
15 to do the screening against the Region 9 PRGs and  
16 the PEA guidance.

17 BURIL: That's what we want to do, Debbie.

18 But in addition to that, I have a concern.  
19 I'll use the example of aluminum. I have concern  
20 that we will identify aluminum as being above the  
21 PEA or above the PRGs, and as a result that's going  
22 to be considered a potential risk.

23 I don't believe that it is because what  
24 we're saying from everything I can possibly imagine  
25 is that we are seeing either particulate or, quote,

1 background levels of aluminum in the water. And I  
2 want that information to be able to say, look, the  
3 entire area is receiving this. This isn't our  
4 problem.

5           Using the example of arsenic in the  
6 desert. If we were in a desert environment, I would  
7 not agree to the idea that we have to clean up  
8 arsenic out of the groundwater because it exceeds  
9 some screening level, because it is ubiquitous  
10 throughout the entire area. I believe that aluminum  
11 is an example of something that could be very much  
12 that way at the JPL site and I want to be able to  
13 verify that or deny it and know that we have got a  
14 problem.

15           ROBLES: That's where our dilemma is. If we  
16 could drop it out, we would love to do it your way.  
17 It's just the question that MCLs are not the issue  
18 here.

19           BURIL: If MCLs were the only issue, we wouldn't  
20 be having this discussion, because there was nothing  
21 above MCL.

22           LOWE: Except the aluminum.

23           BURIL: No. I'm saying that the aluminum still  
24 shows up. It's still detected, but it's not above  
25 MCL. But based on what Barbara is saying, that risk

1 could carry through and we could be chasing  
2 aluminum. That's something I want to be able to  
3 say, that aluminum concentrations that we're seeing,  
4 even though they aren't MCL considerations, are  
5 still background and therefore should not be  
6 considered as a concern.

7 RENZI: May I make a comment?

8 I think I see several different issues  
9 being addressed here. Maybe if we break it down  
10 into characterization of groundwater for metals  
11 contamination. Has JPL contributed to a groundwater  
12 contamination problem regarding metals?

13 And usually that's determined by taking a  
14 look at your background. That's why I was surprised  
15 to find out there are not background data  
16 established for groundwater because that's the first  
17 thing we're trying to determine is, has JPL  
18 contributed to metals in groundwater.

19 Then because the risk assessment is sort  
20 of tied into the RI and that process, are the metals  
21 that are present above background contributed -- for  
22 instance, if background is -- excuse me. If  
23 groundwater concentrations of metals associated with  
24 JPL do exceed background, do they pose a human  
25 health risk? Then you evaluate, quantify what that

1 risk is. Then based on the information that you  
2 have, do we need to remediate groundwater and, if  
3 so, what are the remediation levels we want to have?

4 So there are several different approaches  
5 you can take. I mean there are several different  
6 aspects to this process. I see the first step as  
7 being a problem in terms of there may not even be a  
8 metals problem in groundwater at JPL. From the data  
9 I've seen, it doesn't -- there were no levels that  
10 jumped out at me. Whether or not they are human  
11 health risk I can't do just at a quick glance.

12 How many quarters of data do you have for  
13 metals that have been validated?

14 CUTLER: Two.

15 RENZI: Two?

16 BURIL: We have ten previous to that that were  
17 not done with level 4. But the results are very,  
18 very similar.

19 RENZI: But you have more than that data that  
20 could be used in a risk assessment?

21 I have a suggestion, then. If we're  
22 looking at ongoing groundwater monitoring, is it  
23 something that could be dropped for now and then  
24 picked up later if we find that there is a human  
25 health risk issue? I'm asking the project managers.

1           NAKASHIMA: I think that's what we were trying  
2 to suggest --

3           BURIL: I think that's what Penny said.

4           NAKASHIMA: -- earlier, was that we would take a  
5 look and see what the screening showed before we  
6 made a determination as to whether it's going to be  
7 required in the future or not.

8           BURIL: I don't have a problem, I don't think  
9 Peter has a problem either, with suspending the idea  
10 for now until we can get some of the additional  
11 understanding.

12          RENZI: If you have enough data for the risk  
13 assessment, except for the one you said, what,  
14 chromium is still --

15          BURIL: Chromium is in there. We know there's a  
16 problem there, so we're not going to back away from  
17 that.

18                   I guess the one thing I want to verify is  
19 that, then, we're talking about suspending all  
20 metals sampling with the exception of chromium as  
21 was proposed until such time as we can do a  
22 screening of the data that we have.

23                   Now, in conjunction with that, I still am  
24 not sure that we've had consensus on the background  
25 approach, which I think is a very vital portion of

1 this because I feel that some of these metals, even  
2 though I believe them to be background, are going to  
3 fall through that first screening.

4 I really do not feel that it's to anyone's  
5 benefit for us to be concerned with these if,  
6 indeed, they are present at background  
7 concentrations. So I see this as being a twofold  
8 problem, and because of that, I think we're still in  
9 the position of needing to do that background  
10 sampling as you've indicated, Barbara.

11 The proposal that we have is to utilize an  
12 upgradient public supply well, analyze for the  
13 metals, verify that that is -- basically, we know  
14 we've gotten it, verify that whatever falls through  
15 that screening is, indeed, background. Whatever  
16 makes it through those two screens ultimately would  
17 be something that we would have to deal with in the  
18 future in some fashion. How that is now I don't  
19 know. It depends what that material would be.

20 But I would say that would be our best  
21 approach to try and deal with this metals issue,  
22 which I think, in my own personal and professional  
23 opinion, is going to turn out to be a non-issue  
24 ultimately. It's just a matter of getting there.

25 RENZI: I would really -- I think establishing a

1 background would be prudent because I think it would  
2 take care of the question of whether or not there is  
3 a metals problem.

4 But I think in terms of right now making a  
5 decision about what -- calling what background, I  
6 think maybe it would take a hydrogeologist or  
7 somebody who can understand the dynamics of the  
8 groundwater to establish whether that particular --

9 BURIL: Some of the folks have been here for a  
10 while and understand the hydrogeology itself fairly  
11 well. I'm looking straight at Penny and Steven, and  
12 Debbie I think, to a degree, understands it as well.

13 RENZI: Which public supply wells are you  
14 talking about?

15 BURIL: I'm talking about the ones upgradient at  
16 Hampton Street. Yes. You have a map there, Mark?

17 CUTLER: Right here.

18 NIOU: For metal?

19 BURIL: For metals.

20 NIOU: For metals.

21 Jon and me during lunch --

22 RENZI: We were talking --

23 NIOU: -- we were talking about that. Our  
24 preference is pretty much the gradient. We want to  
25 really use the gradient even though we do understand

1 that the water at MW-1 may not come through the  
2 whole site. But we feel that's a fairly good  
3 upgradient.

4 RENZI: At least for the east side.

5 BURIL: I have to disagree.

6 NIOU: At least for the east side. And because  
7 this well, the water from any gradient we cannot see  
8 the water really go to the site. So --

9 BURIL: I have to disagree with your evaluation  
10 of MW-1 principally because you're talking about  
11 something that's coming down out of the mountains,  
12 which is essentially rain water. It has not had the  
13 opportunity to percolate through the formation and  
14 obtain any of the minerals or other types of things  
15 that might be present in the formation by the time  
16 you sample it at MW-1. That stuff I think is going  
17 to come out pure as driven snow. And if you  
18 establish that as background, you're going to have a  
19 problem all the way around, which I don't believe  
20 exists.

21 NIOU: We understand that. But --

22 BURIL: I think it's an overly conservative site  
23 and really not representative of background.

24 NIOU: But the well you're selecting west of the  
25 site, we feel that the water there, you cannot prove

1 it going onto site another.

2 BURIL: This is one of the things we could do.  
3 If you look at the water chemistries, the water  
4 chemistry at that site in terms of the dissolved  
5 anions and cations.

6 NIOU: No, looking at gradient only.

7 BURIL: I'm looking at gradient as well. If you  
8 look at gradient, that is definitely upgradient from  
9 where we're at. On a regional gradient basis that  
10 is definitely upgradient.

11 MELCHIOR: It's a different water source.

12 BURIL: But it's a different water source.

13 NIOU: I cannot agree with that.

14 ROBLES: Can I make a recommendation that maybe  
15 we need to table this and make a presentation or a  
16 written proposal, because I think we're going to be  
17 around here talking technical merits on which wells  
18 to do. I think it's an action item that we'll need  
19 to do. If we are going to decide that we want to  
20 use background groundwater, we need to select and  
21 let them approve that.

22 BURIL: Okay.

23 ROBLES: It's going to be tough. We decide  
24 which well and give the rationale why we want to use  
25 the wells.

1           BURIL: I do find it surprising that the  
2 regional gradient being from northwest to southeast  
3 and having been recognized for so long and we're  
4 talking about going to the northwest of the site,  
5 that that's not recognized as upgradient naturally.  
6 I guess I'm confused by that.

7           NIOU: We didn't say it definitely go onto site.  
8 We realize the problem. We just say that's a  
9 suggestion. Actually, it's up to you to propose  
10 which one.

11          BURIL: That's right. We will do that.

12          NIOU: And we can discuss on that one. We just  
13 say if you choose that well, right now we have a  
14 real problem with that.

15          ROBLES: Okay. So it looks like we've kind of  
16 stated that we will suspend the metals until we get  
17 more information and make a proposal about  
18 background.

19          BURIL: But we are going to proceed with the  
20 screening.

21          ROBLES: The risk is screening so we can  
22 determine that.

23          BURIL: Okay. That's fine.

24          ROBLES: Any comments, Dan?

25          MELCHIOR: I think that we need to sit back and

1 propose a well.

2 CUTLER: Can I ask a question on that? If  
3 things drop out, if they all drop out against the  
4 screening, all metals, then the background issue  
5 becomes a moot point?

6 BURIL: That's probably true.

7 ROBLES: Then that's what we will recommend,  
8 that we don't need to do groundwater because the  
9 risk screening has dropped it out.

10 BURIL: I'd like to state that categorically and  
11 get consensus from the agencies, and that is that  
12 through the screening process, if all metals drop  
13 out, that further analysis or background sampling  
14 for metals would be not required.

15 NIOU: I have to rely on Debbie.

16 BURIL: Because, really, that's our goal. We'd  
17 like to know that this work that we're doing as we  
18 go through it, if we ultimately --

19 RENZI: Still need to be in the risk assessment.  
20 They can't rule it out due to background.

21 NIOU: I think part of reason why we have come  
22 up with agreed upon background well is that we  
23 really cannot --

24 RENZI: It's not easy.

25 NIOU: It's not easy for this site.

1           RENZI:  There may not be.

2           BURIL:  That's why we went off site in the  
3 regional upgradient direction, to get away from the  
4 flow reversal issue.

5           NIOU:  Yes.

6           BURIL:  We will put it together and see what we  
7 can do.  I guess that's an open question that I  
8 would like at some point in time to see an answer  
9 to:  At what point in time and at what level of  
10 surety will the agencies realize that we do or do  
11 not have a problem?

12                         Again, if we go through the screening,  
13 everything drops out, are we done?

14           LOWE:  I think we keep talking these vague terms  
15 and I think people have different meanings.  People  
16 are thinking different things when we talk too  
17 vaguely.

18           BURIL:  I'm thinking of going out and continuing  
19 to do an analytical regime for metals.  I know it's  
20 going through the formal risk assessment.  I have no  
21 problem with that.

22           AMIR:  That's our understanding too.

23           LOWE:  What I put here is if risk screening,  
24 i.e., comparison to Region 9 PRGs and running  
25 through the PEA guidance --

1 BURIL: If that drops everything out. Using  
2 that vague term but knowing, hopefully, that  
3 everyone realizes what that means.

4 LOWE: How about if I say "no exceedences"?

5 ROBLES: Right.

6 BURIL: That's fine.

7 LOWE: Comparison to Region 9 PRGs, PEA and  
8 there's no exceedences, then background comparison  
9 is not needed for the decision on whether to  
10 continue sampling your groundwater for metals.

11 BURIL: That's what I want to be sure. Yes.

12 NIOU: Yes.

13 LOWE: And this screening has nothing to do  
14 with --

15 BURIL: With the ultimate risk assessment  
16 presentation, no.

17 LOWE: Correct.

18 ROBLES: Good.

19 RENZI: Don't make that assumption because  
20 they're saying right now they're going to drop it  
21 out.

22 NAKASHIMA: No, but annually, once a year,  
23 you'll be analyzing for --

24 RENZI: No, they're talking about dropping it  
25 completely.

1 BURIL: I don't recall that we said on an annual  
2 basis. I don't believe we have that in there.

3 CUTLER: No. What we said is with the current  
4 list of constituents, the VOCs, the chromium, the  
5 hex chrome, when we drop those out, say we're doing  
6 all the wells on site for chrome and hex chrome.  
7 After one year we may decide only Well 13 and the  
8 next well around it we want to do it for chrome, hex  
9 chrome. Then once a year we'll add everybody else  
10 back in. It's basically the suite of analyses we  
11 start with and the quarterly monitoring will be done  
12 once a year, not the PRI suite.

13 BURIL: Mark, what we're talking about, though,  
14 is the maximum suite of analyses that we will ever  
15 do at one time is what's in the proposal now and we  
16 will pare that down, but we would never exceed  
17 what's in the proposal now.

18 CUTLER: Exactly. That's what I was trying to  
19 say.

20 BURIL: So we would never go back to Title 22 or  
21 26 metals in the analyses on an annual basis or any  
22 other basis if we identify the screening as having  
23 no exceedences, and that the risk appears to be  
24 negligible or nonexistent. Once we determine that,  
25 I don't want to have to keep revisiting this.

1 CUTLER: That's how it's currently proposed.

2 LOWE: So will you be doing this risk screening  
3 very soon?

4 BURIL: As rapidly as we can.

5 LOWE: Can I put that as an action item?

6 BURIL: I don't know how long it will take or  
7 what we're talking about here, but we're going to  
8 try to get it done quick.

9 RENZI: So they're going to drop it permanently,  
10 no more metals if the screen shows that --

11 AMIR: I think we need to discuss that. We  
12 can't say it right now.

13 ROBLES: That's why we put it there. Put an  
14 action item that DTSC needs to make a decision on  
15 that. We'll do the risk with that, but I question  
16 it. Because they've got to make that choice.

17 LOWE: I'm confused if there's nothing that  
18 exceeds the Region 9 PRGs or what DTSC was pushing  
19 for for JPL to screen against the PEA guidance, if  
20 there's nothing that exceeds that, either of those  
21 values, why would we want to continue sampling the  
22 groundwater for these?

23 AMIR: That's what we need to discuss  
24 internally, and then we'll -- we are going to write  
25 you a letter and let you know all these items in

1 writing so you have a record of it, too.

2 But we need to discuss. We can't make the  
3 decision. The project managers has some concerns.  
4 We have to discuss it with our experts and then make  
5 sure that we are making a decision that the next  
6 people, when they come in, they're not going to open  
7 it up again. Okay? It's for your own protection  
8 and also for our protection too.

9 (Mr. Bishop returns to the meeting room.)

10 BURIL: This won't be for the record, Louise.

11 (Discussion held outside the record.)

12 BURIL: Back on, please.

13 How soon do you think you might have that  
14 letter for us explaining all these points?

15 AMIR: As we said, you can go ahead with your  
16 monitoring.

17 BURIL: That's fine. We'd just like to  
18 understand what --

19 AMIR: Before the next meeting we will resolve  
20 these issues.

21 LOWE: Does anybody want me to go through this,  
22 or shall we move on?

23 BURIL: Why don't you just quickly, to be sure  
24 everyone knows what we're talking about.

25 LOWE: To summarize for Jon, we were talking

1 about sampling the groundwater for metals, and we  
2 all agreed that for this next July sampling event  
3 that JPL does not have to sample for metals, but  
4 we'll potentially revisit this issue later.

5 JPL will, and it's an action item down  
6 here, do the risk screening for metals.

7 And there's an issue about how we're going  
8 to determine background.

9 JPL's proposal was to use an upgradient  
10 public water supply well on Hampton Street. EPA,  
11 and we were speaking for you, Jon, suggested using  
12 Monitoring Well Number 1. JPL opposed that idea,  
13 saying that there's too much rain water coming in in  
14 that area and it's not representative of the site  
15 conditions.

16 The action item is that JPL will consider  
17 these issues and make a technical proposal to the  
18 group on how to select a background well.

19 BISHOP: Okay.

20 LOWE: We were talking about doing the risk  
21 screening, and what that means is to look at Region  
22 9 PRGs and the PEA guidance and see if we have any  
23 exceedences of those values. And the idea was if  
24 there was no exceedences, then we could discontinue  
25 sampling the groundwater for metals.

1 DTSC was unwilling to commit to that at  
2 this time, and said that they would consider it and  
3 get back to the group on whether or not they can  
4 approve of this concept.

5 BISHOP: Okay.

6 BURIL: And that was to be before the next  
7 meeting.

8 LOWE: Anything else to add?

9 ROBLES: I think we can jump to the schedule.

10 BURIL: We still haven't discussed the soils  
11 part of this yet.

12 RANDOLPH: Dan, do you have any other comments?

13 MELCHIOR: No, I don't.

14 BURIL: I don't think we've really addressed the  
15 soils issues, Debbie.

16 Did we agree earlier that we were going to  
17 table those until later?

18 LOWE: The tributyl tin.

19 BURIL: That's right. But then the other  
20 changes, I don't think we've come to resolution on  
21 those.

22 LOWE: Let's look at what we have left to  
23 discuss. We have the soil samples and soil borings  
24 that JPL has already agreed to do. I think that  
25 DTSC is looking for metals and SVOCs.

1 BURIL: B.G., what was the change in the scope  
2 that we proposed versus what DTSC is requesting?

3 RANDOLPH: They've suggested additional soil  
4 borings and adding tributyl tin to all soil samples,  
5 and, in the test pits, adding metals.

6 BURIL: The Title 22 or 26?

7 RANDOLPH: It would be 26.

8 LOWE: So we're talking about two things. One  
9 is the additional boring, and then in the trenches.

10 BURIL: In the trenches we have the tributyl  
11 tin.

12 LOWE: Which is separate.

13 BURIL: Right. Just to identify them. And the  
14 Title 26 metals added on.

15 LOWE: Was SVOCs also an issue?

16 RANDOLPH: No. They were already agreed to.  
17 That was one of the four analyses that were agreed  
18 to in January.

19 BURIL: Then under the additional borings, that  
20 was wide open. We do not understand, one, the need,  
21 two, how many they're looking for and, three, the  
22 analytical suite that's being requested.

23 RANDOLPH: And to add to that, where.

24 BURIL: That's got it.

25 LOWE: So it's 2:40. Which would we like to

1 talk about first?

2 BURIL: The one you've got your pen pointing at  
3 is one we have to understand because that's an open  
4 scope. It's not only a question of analytical  
5 procedures, it's an open scope. We don't really  
6 understand how to approach it.

7 LOWE: But then again, if you think this one is  
8 more easily resolved, maybe we should do it first.

9 BURIL: Your choice.

10 RANDOLPH: That one is easiest. That will take  
11 five minutes.

12 LOWE: Okay. Would you like to start this, or  
13 are you looking for DTSC to start this discussion?

14 BURIL: We need to hear some of the rationale  
15 behind it. What changed between January and now to  
16 prompt them to want to put this in?

17 NAKASHIMA: Well, our concern is that this area  
18 wasn't fully characterized with the proposal for  
19 OU-2 addenda.

20 And also, we didn't see in here the  
21 rationale in which you were providing to eliminate  
22 the chemicals from the sampling plan, because in the  
23 original sampling plan you did have the metals in  
24 there.

25 And then the tributyl tin concern came

1 from the cooling tower waste waters that were being  
2 discharged into the Arroyo.

3       LOWE: I think the tributyl tin issue is pretty  
4 much tabled for now.

5       BURIL: The tributyl tin --

6       NAKASHIMA: But it was up there, so --

7       BURIL: The tributyl tin I think we should table  
8 based on the discussion we had earlier. We can  
9 leave that one alone.

10               The rationale and so forth that you are  
11 concerned with, Penny, it was our understanding that  
12 in the January 18th RPM meeting minutes we presented  
13 that rationale in addition to the written rationale  
14 we provided in a letter in November. I have the  
15 letter here. I can look up the date.

16               But those two things in combination were  
17 our rationale. We did not believe it needed to be  
18 restated since in the meeting minutes we stated that  
19 the acceptance of the rationale would be documented  
20 within the meeting minutes. And that is in the  
21 meeting minutes.

22               So we are, I think, understandably  
23 confused as to what happened.

24       NAKASHIMA: I also asked that if you were going  
25 to present this in a workplan or you were just going

1 to consider your first letter as your proposal. And  
2 you said "No, we'll document everything in the  
3 workplan."

4 BURIL: I'm not sure where that is. If you can  
5 show it to us, then by all means I would appreciate  
6 seeing it.

7 NAKASHIMA: This is September 8, 1995, page 93.  
8 And I guess it starts with you, Chuck, on -- okay.  
9 On 92 is where you start talking about this. And on  
10 page 93, line 4 I ask, "Well, can you state that in  
11 the proposal?"

12 BURIL: What was it that we were going to be  
13 stating, Penny? I don't have that particular RPM  
14 meeting minutes with me. Can you give a quote as to  
15 what it was that was going to be provided?

16 NAKASHIMA: Let's see.

17 BURIL: Because if we did not provide something  
18 we agreed to, then certainly I'm in error and I want  
19 to correct it.

20 LOWE: I'm not sure this is a real productive  
21 conversation.

22 NAKASHIMA: Anyways, it's just that I'm just  
23 trying -- he's quoting from the minutes. I'm trying  
24 to say that --

25 BURIL: We are trying to understand.

1           NAKASHIMA:  -- one time I asked for it.

2           LOWE:  I think it's a moot issue of should the  
3 rationale have been in there or shouldn't it.

4                    It's really what is the rationale and do  
5 we have a common understanding of what needs to  
6 happen in the future.  So I think the question  
7 originally is from Penny to JPL.  What is your  
8 rationale for not sampling for metals?  You alluded  
9 to it was in the meeting minutes before.  Well, what  
10 was it?

11           BURIL:  The rationale basically is that we had  
12 not found anything in terms of concerns with metals  
13 anywhere else on the site.

14                    Secondly, when we're in the trenches,  
15 there was an issue of whose concern is this.  If we  
16 found something that was ultimately going to be  
17 identified as a JPL concern, then we would be  
18 dealing with it.  But if we're dealing with other  
19 people's concerns, in particular, God knows who, I  
20 don't know, I can't even tell you who, but we did  
21 not understand how this information would be  
22 utilized.  And there was no further discussion  
23 beyond what we had proposed, and that was the  
24 analytical suite that you see there presented and  
25 which we thought was agreed to based on the meeting

1 minutes.

2           If we're in error, then by all means, we'd  
3 appreciate you pointing it out so we can correct it.  
4 I mean, there's no doubt.

5           LOWE: I have to say I agree with Penny's  
6 concern that the workplan should be a stand-alone  
7 document and it should document your rationale for  
8 your decisions because we don't want people in the  
9 future to come back and question the decisions that  
10 we've made. And I think the easiest way to do that  
11 is to make sure that your workplans document how  
12 you're making your decisions and why, and not trust  
13 that someone is going to have the time or the energy  
14 to go back to meeting minutes and past  
15 correspondence and stuff like that.

16           BURIL: If that's a concern that we can address  
17 by simply adding in the discussion that was provided  
18 in January in a format that works in that document,  
19 then I don't think we have a problem with that.

20           LOWE: So then the question goes back to -- go  
21 ahead, Jon.

22           BISHOP: I'm reading through that discussion  
23 about what sampling methods do we take. I don't  
24 really see any rationale in here at all. It just  
25 says "We're planning to do it for hex chrome because

1 we found that." That's what I see here in the  
2 meeting minutes. There's no discussion of why the  
3 other metals were -- it's inferred, I guess, by that  
4 comment.

5 ROBLES: Would the issue be resolved if we  
6 formalized it within the workplan?

7 LOWE: I guess the real issue is: Does DTSC  
8 consider this adequate rationale for not analyzing  
9 for Title 26 metals? I'd like to focus not on where  
10 should this be and why isn't it here and are the  
11 meeting minutes clear. I think we need to focus on  
12 what's the rationale; do we agree with it.

13 RENZI: Can I make a statement?

14 I wasn't involved in any of those  
15 discussions, but it's been my understanding that  
16 there has been very limited soil sampling along that  
17 area and there had been reported discharges or  
18 possible disposals along there. And for most site  
19 investigations that I'm familiar with you're trying  
20 to determine the extent of contamination, whether or  
21 not there is contamination and, if so, what the  
22 extent of it is. A metal screen is usually pretty  
23 basic analyses that's run when you're looking for  
24 contamination, especially in a discharge area or in  
25 a release area.

1           So my recommendation would be to include  
2 it. I don't know. It seems to me that not finding  
3 metals elevated in some of these other borings on  
4 site may not have any relevance to discharges or  
5 releases along that area, if that's where the  
6 trenches are. Is that where you've proposed --

7           NAKASHIMA: Right. Down here.

8           RENZI: Across there.

9           BURIL: Again, I think one of the things in the  
10 context that we proposed this in is that these  
11 trenches were designed as a go-look-and-see kind of  
12 thing. The only thing that we had seen up until  
13 that point that was a concern, and the only thing  
14 that had been identified in the correspondence that  
15 you refer to from past discharges was chromium.

16           So we have agreed to go into the Arroyo,  
17 dig the trench, look for materials that were  
18 documented as being a concern and analyze for them  
19 at the locations that we believed were the most  
20 likely places that we might find a problem.

21           That's the rationale behind the entire  
22 approach, not just the analytical suite, but the  
23 locations, the methodology, even the reason why we'd  
24 do it at all.

25           RENZI: I'm sorry. I didn't realize --

1 BURIL: I'm not trying to be argumentative. I'm  
2 just trying to lay out what the overall perspective  
3 is so everyone understands where we came from on  
4 this.

5 There was a concern identified, and we  
6 laid out what we thought was a reasonable approach.  
7 This is basically where we're at. We feel this is a  
8 reasonable approach and are wondering what rationale  
9 there is to increase the analytical scope of this,  
10 given the fact that the documentation that's  
11 available identifies only chromium.

12 ROBLES: Only chrome is of a concern from JPL's  
13 view, which we believe --

14 RENZI: I'm sorry. I thought there were  
15 discharges -- that we really didn't know what all  
16 was discharged out there. I mean, that was my  
17 understanding, that you didn't have good  
18 documentation about what historically may have been  
19 discharged in that area, or released, either through  
20 storm runoff, sheet flow, intentional discharges.

21 ROBLES: We don't go into the Arroyo Seco to  
22 discover anything. That's not our property.

23 RENZI: It may not be your property. I'm just  
24 saying historically there could have been migration  
25 of contaminants to that area. And to say "It's not

1 our property" or "We're not going to analyze for it  
2 because we don't think there might be one  
3 constituent there" I don't think is -- for me, as  
4 the regulator, isn't prudent.

5 ROBLES: We've stated that over and over again.  
6 It's not our property. We go after what is  
7 documented. We're not going after everybody else's  
8 chemicals. We don't know whose chemicals those are.  
9 That's an open no-man's land.

10 My personal opinion is that if DTSC is  
11 that concerned about it, they need to go after the  
12 City of Pasadena, make them a PRP. But we're not  
13 going to deal with that. We only deal with chrome  
14 because there's a document that says chrome is out  
15 there.

16 RENZI: I didn't see that chrome was  
17 specifically cited.

18 NAKASHIMA: There were other chemicals also.

19 BURIL: What were they specifically?

20 RENZI: It just gives qualitative descriptions.  
21 I didn't see any analysis in those letters.

22 NAKASHIMA: In that package that I sent you  
23 quite a while ago. Actually, I sent it to Bryan and  
24 you were cc'd on it, along with Jon. And there's  
25 other things listed in there also. There were burn

1 pits. There were releases of VOCs and you were  
2 cleaning out some of your -- after testing and you  
3 were cleaning out. It states that some of the VOCs  
4 ran off and into the Arroyo. So there was more than  
5 just the chrome that was documented.

6 BURIL: That's fine. But I'm focusing on  
7 metals, is what I'm focusing on. We've already  
8 agreed to the SVOCs. Correct, B.G.?

9 RANDOLPH: Yes.

10 BURIL: To address the issues of other types of  
11 metals that might have come down from the types of  
12 operations that you just described. We've agreed to  
13 that.

14 RANDOLPH: Oh, yes. Plus VOCs.

15 BURIL: Plus the VOCs, which is kind of a  
16 question mark given the fact of the way that we're  
17 sampling, and so forth. I don't know what relevance  
18 the samples will have for VOCs given the fact we've  
19 got to go into the bottom of the trench and dig them  
20 out. But we're willing to do it.

21 But when you start talking about  
22 increasing the metals things beyond anything that,  
23 one, we have documentation that allows us to know  
24 that we have a touching concern potential with that  
25 and, two, that there may be something outside of

1 JPL's influence that is there that we may ultimately  
2 be held responsible for if we find it, gives us  
3 great concern.

4       LOWE: Obviously, there's disagreement on  
5 whether or not JPL should sample for the metals. So  
6 if we came at it from another angle and said does  
7 JPL object to DTSC taking samples and analyzing them  
8 in their own lab --

9       BURIL: No, not at all. But don't hold us  
10 responsible for what you find, beyond chromium.

11       AMIR: That's a decision that we are going to  
12 make.

13       RANDOLPH: Pardon?

14       AMIR: That's a decision that we are going to  
15 make later on. But right now, based on what you  
16 said, we can go ahead and do the sampling ourselves.

17       NAKASHIMA: And the analyses.

18       ROBLES: That's fine.

19       BURIL: That's fine. We have no objection to  
20 that.

21       LOWE: And the concerns about QA/QC or --

22       ROBLES: It's not our property.

23       BURIL: I would characterize this and, Pete, I  
24 think you would agree with me, that DTSC is  
25 undertaking this under their own volition.

1           ROBLES: Under their own volition.

2           BURIL: What their findings are will be DTSC  
3 findings, and what relevance they have to JPL will  
4 be a point of contention.

5           LOWE: So JPL is saying --

6           AMIR: The contaminants don't stop at the  
7 border.

8           ROBLES: I'm sorry. We will not do anything in  
9 the Arroyo Seco. It is not our property. End of  
10 discussion.

11          AMIR: Right. But what I'm saying is that the  
12 contaminants don't stop at the border of the  
13 properties. We always hold PRPs, potentially  
14 responsible parties, responsible for the  
15 contaminants off site --

16          ROBLES: You need to go after the City of  
17 Pasadena.

18          AMIR: -- if they migrated off site.

19                    So that's a discussion. I never heard  
20 that before, actually. This is the first time I'm  
21 hearing this argument.

22          BURIL: Maybe to just elaborate for a moment and  
23 then move on, the reason we have that concern is  
24 that there are a number of people over the years who  
25 have discharged in the Arroyo and, in fact, there

1 are a number of places where discharges still occur  
2 that are not under the control of JPL, and never  
3 have been.

4 BISHOP: Right. But let's be clear about it  
5 that JPL has also discharged to the Arroyo over the  
6 years.

7 BURIL: Yes. Absolutely. Absolutely. I'm not  
8 saying that we haven't. But I'm saying we have  
9 other entities, including municipalities, that  
10 discharge, even utilizing JPL's discharge points.  
11 The City of La Canada has a portion of their storm  
12 water runoff come off through JPL's property and  
13 discharge through our site point. So at what  
14 juncture you make the distinction as to whose  
15 concern is what, is what we are concerned about.

16 AMIR: Yes. And we always deal with these  
17 issues.

18 BURIL: Okay.

19 NAKASHIMA: Can I interject something here. I  
20 was wondering if you could tell me just to maybe  
21 clear up some things. The proposed sampling points  
22 here are right on the boundary of JPL; right along  
23 the boundary.

24 BURIL: Yes.

25 NAKASHIMA: Are you saying that at one time this

1 area was used by other people, discharging?

2 BURIL: Absolutely.

3 ROBLES: It wasn't our property.

4 BURIL: It wasn't our property up until the late  
5 '50s, early '60s, maybe even beyond that. It was  
6 City of Pasadena property prior to that.

7 If you look back in that photo  
8 documentation that you have from EPA, the  
9 green-spined thing. Let me just show you what I'm  
10 thinking about here.

11 (Discussion held outside the record  
12 from 2:57 P.M. to 2:59 P.M.)

13 LOWE: Let me cross out that NASA/JPL will allow  
14 DTSC to take samples.

15 ROBLES: Exactly.

16 LOWE: I think this is an issue whether or not  
17 this data will end up in the RI. I know that right  
18 now JPL's position is no. I say let's see what the  
19 data shows, and if we have to fight about it we'll  
20 fight about it later.

21 ROBLES: Okay.

22 BURIL: That's fair.

23 LOWE: I think another thing that happened today  
24 is that these ideas about rationale for why it's not  
25 needed came out, really, in today's discussions and

1 not in that document or in another document. I  
2 think it needs to go somewhere. And I put down four  
3 items.

4 The first one, JPL doesn't consider metals  
5 to be a problem on the site.

6 The second one, if it's in the Arroyo, how  
7 do we prove that it's JPL's problem.

8 The third, that JPL was using past  
9 discharge information to select the analytes.

10 And the fourth one is the trench was not  
11 on JPL's property, part of JPL's property until  
12 1958.

13 BURIL: I don't know if that date is exactly,  
14 but it's somewhere in that time frame.

15 LOWE: Okay. These are all useful ideas to have  
16 written down somewhere.

17 BURIL: Sure.

18 AMIR: We are still talking about metals.  
19 Right?

20 RANDOLPH: That's correct.

21 ROBLES: Yes.

22 AMIR: For VOCs and SVOCs you're willing to go  
23 off the property. Right?

24 BURIL: We are doing it in the trench.

25 LOWE: In the trenches that have already been

1 agreed upon, JPL is sampling for VOCs and SVOCs.

2 RANDOLPH: And chrome and hex chrome.

3 BURIL: That's right. All the things that we  
4 could document that we have a touching concern with  
5 we are willing to sample for in the trenches that  
6 we're already proposing to do.

7 AMIR: But metals, because you don't have any  
8 documents.

9 BURIL: Metals because we don't have any  
10 documentation. The only documentation that is there  
11 is for chromium and we have no idea, if we do find  
12 something, if it is actually ours or somebody  
13 else's.

14 ROBLES: The location of those trenches are  
15 landfill that the City of Pasadena had dug up near  
16 those. And that's where the problem lies. Part of  
17 those trenches lay right on the border and could be  
18 a couple of feet. So we decided to take the  
19 initiative and go for it. But that's where our  
20 concern is, because we believe from that map they  
21 look like landfills that the City dug.

22 My bet is, I'll put a dollar on it, that  
23 we'll find something. We don't know if it's ours or  
24 not. That's the point. It was a landfill. It was  
25 used by the City and it allowed everybody to dump in

1 there.

2       RANDOLPH: That's the primary problem for all  
3 the hydrocarbons that were found under Building 306  
4 during the excavation for the foundations. That was  
5 all non-JPL property when those materials were  
6 disposed of there.

7       LOWE: It just seems like we're not getting any  
8 further on this.

9       BURIL: No.

10       LOWE: DTSC has agreed to take the samples.  
11 Like I said, we'll table the issue about whether or  
12 not the data ends up in the RI.

13       BURIL: Let's clarify one other point, then,  
14 that JPL will pursue the sampling as it has been  
15 proposed, with the issue of tributyl tin yet to be  
16 decided.

17       ROBLES: Right.

18       LOWE: I think that's clear in my first bullet.

19       BURIL: I couldn't read that. That's why I  
20 asked.

21       LOWE: TBT, question mark.

22                So for the trench JPL will sample for  
23 VOCs, SVOCs, chrome, hex chrome, and tributyl tin  
24 has a question mark.

25       BURIL: If it need be. That was too small for

1 me to read.

2       LOWE: Sorry.

3               So I guess this is back into DTSC's court  
4 to try and provide JPL with rationale for why you  
5 think additional work is necessary, how many more  
6 you think is necessary, what analytes, and the  
7 location.

8       NAKASHIMA: Okay. At this time we won't provide  
9 you how many. That's something that we'll provide  
10 you in a letter later, or we can discuss it at  
11 another time.

12               The rationale was that on some of these  
13 areas that you're proposing for sampling, it hasn't  
14 been clearly defined where this discharge area was.  
15 Or you know the general location, but you don't know  
16 the exact delineation of the discharge area. That's  
17 why I felt that one boring would not be adequate to  
18 characterize that discharge area.

19       RANDOLPH: Again, it was agreed to one boring in  
20 January.

21       BISHOP: Where was that, B.G.?

22       RANDOLPH: I don't quite understand why --

23       NAKASHIMA: The concept of what you were  
24 proposing to do as far as doing additional work and  
25 putting the borings and looking at the locations

1 where the discharge areas were, that was -- the  
2 concept was agreed to.

3 RANDOLPH: We started talking about it, Penny,  
4 and we went all the way through it quite thoroughly,  
5 and finally it was asked if it was okay, and you  
6 said okay. Chuck said that's great now that we have  
7 consensus. And you said "Right, and with B.G.'s  
8 explanation."

9 NAKASHIMA: What page?

10 RANDOLPH: That is on page 68 of the January  
11 meeting. We went through that location fairly  
12 thoroughly.

13 BURIL: Is that the end of it?

14 RANDOLPH: That's the end of it. It basically  
15 starts at the bottom of page 65.

16 BURIL: I mean, we were even concerned about  
17 doing chromium. Under your concerns expressed in  
18 this meeting we added chromium to the list. In  
19 fact, we speciated it to address your concern about  
20 hex chrome. The number of samples and the number of  
21 locations was never an issue, which is why we're --

22 BISHOP: I'm still trying to find it, Chuck.

23 So --

24 LOWE: I guess --

25 BURIL: Okay. Without trying to belabor a

1 point, I guess what we're trying to understand is  
2 basically where you're at. What is it you want?

3 BISHOP: In general, the idea is that if we have  
4 an area of concern, you try and go out and delineate  
5 where that area of concern is. If you've got a  
6 really good idea where it is, you may be able to do  
7 it with one boring. If you're not too sure, you may  
8 need more than one boring.

9 I remember the conversation also. I don't  
10 remember that we were determining that we were going  
11 to do it with one boring. I remember we were going  
12 to determine that yes, this is an area we need to  
13 look at. That's all I really remember about it.  
14 That's why I wanted to look at it, to make sure.

15 BURIL: That's fine. I would encourage you to  
16 do so. Because we thought, quite frankly, that we  
17 had come to consensus on this whole thing, which is  
18 what allowed us to move forward without having a  
19 written letter of documentation stating that the  
20 scope that was proposed was acceptable. In fact, we  
21 have it in these meeting minutes that these meeting  
22 minutes would document acceptance by the agencies as  
23 good enough, and that that scope was ready to move  
24 out.

25 There's obviously a missing communication

1 of some sort here.

2 BISHOP: Could you just show it to me? I've  
3 read it three times and I just don't see anything  
4 about what we were talking about. I see the trench.  
5 And that's where I just want to be --

6 AMIR: It doesn't say one boring.

7 NIOU: No.

8 BISHOP: Start about in here and end up up here.  
9 We were talking about that one particular area.

10 We're talking about one particular area.

11 RANDOLPH: Yes.

12 BISHOP: So I think that actually, if I read  
13 this correctly, you're both right. B.G. is talking  
14 about one particular area. Penny is talking about  
15 to address one particular area takes more than one  
16 boring.

17 RANDOLPH: If I put in -- let me just put this  
18 in for an example. I can put one boring in there  
19 about maybe, the best guess that we have where it  
20 came out. Any additional borings in that area would  
21 be so absurdly far out of the area that we believe  
22 it was in that it wouldn't make any sense.

23 ROBLES: That's because of the physiology of the  
24 area?

25 RANDOLPH: Yes, and also the extreme limitation

1 of underground utility lines, and the main power  
2 line that serves JPL is overhead.

3 BURIL: So there are a lot of constraints in  
4 terms of field conditions that we tried to eliminate  
5 to the greatest degree possible with this location.  
6 Additional locations, from what B.G. is saying, may  
7 not be feasible within a reasonable distance of this  
8 original location. He may be tens or more yards  
9 away, in which case he would be off of what we would  
10 anticipate to be that most likely flow path for the  
11 discharge.

12 This is something that we thought was  
13 understood, although it's not clearly stated here.  
14 But we thought that that was something that you  
15 understood.

16 BISHOP: I think that -- my feeling is that  
17 whenever we've talked about a specific location, the  
18 interpretation that JPL has had is that you can take  
19 one boring or one soil vapor sample for a whole  
20 building or a whole area or a whole discharge point,  
21 and our feeling has always been that the reason that  
22 we've agreed to that is that you have such huge  
23 constraints on drilling anywhere on your site. A  
24 site that is the size of this parking lot we're  
25 talking about would normally get five to six borings

1 or vapor wells. You don't put in one boring for a  
2 huge area and say this eliminates it as a concern.  
3 But you have always had such huge problems with  
4 siting that it's been we just got to do what we can  
5 find.

6 But to assume that whenever there's one  
7 area of concern that you can take one sample and  
8 eliminate that as an area of concern I think is not  
9 a reasonable assumption.

10 BURIL: Jon, I guess one thing I would say to  
11 your comment -- first of all, you're correct. I  
12 won't argue the fact that a large area is something  
13 that you would not want to assume one boring is  
14 adequate for.

15 However, the way that I interpreted this  
16 is that we are dealing with a point of discharge,  
17 and it is a point of discharge. It is not a large  
18 sheet flow of discharge. It is one that's coming  
19 off of the substation historically. As such, it's  
20 fairly narrow. Because of that, we're not talking  
21 about a large area. We're talking about an area  
22 where we would place something with the hopes of  
23 hitting that narrow area and being able to know  
24 whether we had a problem. The constraints that we  
25 have in the field are such that spreading out from

1 that area may simply not be possible and still be  
2 reasonable in addressing that area.

3 BISHOP: Now, Penny, you were considering  
4 additional points for that. In your mind, they were  
5 closer to the substation? Is that correct?

6 NAKASHIMA: Right. I was wondering if you could  
7 point out to me areas that you can't get into or  
8 that you have no access to and that you can't drill.

9 BISHOP: This is the area, shown on your map,  
10 right here at the south end of the substation in  
11 this particular area. It may not be exactly here.  
12 It may be here. This is for diagrammatic purposes  
13 only.

14 NAKASHIMA: Right.

15 RANDOLPH: Now, this is where the old drainage  
16 came down. It came down from way up in here, just  
17 down, down, came through, wrapped around and came  
18 out right in through this area right here.

19 The main core for all of the utilities,  
20 power, is right here. They bleed off into a jillion  
21 transformers in through here. The only area where I  
22 would really like to put it is right in the middle  
23 of the loading ramp where they store all of the  
24 roll-off bins for JPL-generated rubble. That would  
25 be better.

1 BURIL: Talking about the roll-offs there by  
2 306?

3 RANDOLPH: Yes.

4 BURIL: Don't you touch that area. That's my  
5 recycling area. Don't you dare touch that.

6 NAKASHIMA: So what's the reason for not being  
7 able to drill here?

8 RANDOLPH: Where?

9 NAKASHIMA: In this area over here.

10 RANDOLPH: This is a road. These are two  
11 retaining walls. This is a road up into this area  
12 up through here. And there's the whole  
13 configuration. There's a brand new building right  
14 here.

15 NAKASHIMA: Why can't you drill over here?

16 RANDOLPH: In that ramp?

17 NAKASHIMA: Uh-huh.

18 RANDOLPH: Too steep.

19 NAKASHIMA: Okay.

20 RANDOLPH: These are sheds.

21 NAKASHIMA: Why don't you trench it?

22 RANDOLPH: Trench it? You'd never get down.  
23 You'd never get through it.

24 NAKASHIMA: There's no -- you're saying  
25 logistically you can't get anywhere from here to

1 here?

2 RANDOLPH: That's correct.

3 NAKASHIMA: Either way, either distance across.

4 RANDOLPH: No. This is a retaining wall.

5 LOWE: I'm going to interrupt you guys with  
6 another procedural issue. Peter has to go to catch  
7 his carpool, and I think it would be useful for us  
8 to check calendars and pick another date before he  
9 goes.

10 (Discussion held outside the record.)

11 (The meeting was adjourned at 3:29 P.M.)

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